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CIS

PROPOSED FISCAL YEAR 1983 BUDGET REQUEST

HEARINGS

BEFORE THE

COMMITTEE ON
ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE

NINETY-SEVENTH CONGRESS

SECOND SESSION

TO REVIEW THE PRESIDENT'S PROPOSED BUDGET FOR FISCAL YEAR 1983 IN CONNECTION WITH THE PREPARATION OF THE MARCH 15 REPORT TO THE SENATE BUDGET COMMITTEE

FEBRUARY 9, 10 AND 23, 1982

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PROPOSED FISCAL YEAR 1983 BUDGET REQUEST

TUESDAY, FEBRUARY 9, 1982

U.S. Senate,
Committee on Energy and Natural Resources,
Washington, D.C.

The committee met, pursuant to notice, at 10 a.m., in room 3110, Dirksen Office Building, Hon. James A. McClure, chairman, presiding.

Present: Senators McClure, Domenici, Wallop, Warner, Murkowski, East, Bumpers, Metzenbaum, Melcher, and Bradley.

Also present: Gary Ellsworth, counsel; Richard D. Grundy and Russell R. Brown, professional staff members; D. Michael Harvey, chief counsel for the minority; and Thomas B. Williams, professional staff member for the minority.

OPENING STATEMENT OF HON. JAMES A. McCLURE, A U.S. SENATOR FROM THE STATE OF IDAHO

The Chairman. The committee will come to order. Today the committee will begin budget hearings on various programs within its jurisdiction prior to making recommendations to the Senate Budget Committee on March 15.

The hearing today will focus on the programs of the Department of the Interior. Tomorrow the committee will turn its attention to the programs of the Forest Service and the U.S. Synthetic Fuels Corporation.

During these hearings the committee will be evaluating the various fiscal year 1983 proposals by President Reagan which affect the committee's jurisdiction.

All of us are aware of the punishing consequences of inflation and the need to promote economic recovery with substantially reduced inflation rates. We must reverse the cancerous combination of sustained inflation and economic distress which continues to drain the vitality out of the American economy. We must capture control over the Federal budget. We must take the necessary steps to reduce the budget deficits that have plagued us for years.

We must not lose sight of the seriousness of the economic challenges facing our country. As chairman of the Committee on Energy and Natural Resources, I intend to conduct in a timely manner an indepth review of the programs within our jurisdiction. Our goal must be Federal natural resource programs that support that same creativity and individual initiative of the American people that made our country great. As a nation, our capability to sustain economic growth requires Federal natural resource policies that support sound economic decisions by the private sector. Through the balanced development of our natural resources we can help instill in the American economy the necessary strength and vitality to assure economic recovery.

In examining the proposed fiscal year 1983 budget for programs of the Department of the Interior, I intend to closely examine whether the proposed funding levels positively support the short- and long-term stewardship of our natural resources for the benefit of all Americans.

[The prepared statement of Senator McClure follows:]

OPENING STATEMENT
CHAIRMAN JAMES A. MCCLURE
FEBRUARY 9, 1982 (10:00 A.M.)
PROPOSED NATURAL RESOURCES BUDGET FOR FISCAL YEAR 1983

GOOD MORNING. TODAY THE COMMITTEE WILL BEGIN BUDGET HEARINGS ON VARIOUS PROGRAMS WITHIN ITS JURISDICTION PRIOR TO MAKING RECOMMENDATIONS TO THE SENATE BUDGET COMMITTEE ON MARCH 15. THE HEARING TODAY WILL FOCUS ON THE PROGRAMS OF THE DEPARTMENT OF THE INTERIOR. TOMORROW THE COMMITTEE WILL TURN ITS ATTENTION TO THE PROGRAMS OF THE U.S. FOREST SERVICE AND THE SYNTHETIC FUELS CORPORATION.

DURING THESE HEARINGS THE COMMITTEE WILL BE EVALUATING THE VARIOUS FISCAL YEAR 1983 PROPOSALS BY PRESIDENT REAGAN, WHICH AFFECT THE COMMITTEE'S JURISDICTION.

ALL OF US ARE AWARE OF THE PUNISHING CONSEQUENCES OF INFLATION AND THE NEED TO PROMOTE ECONOMIC RECOVERY WITH SUBSTANTIALLY REDUCED INFLATION RATES. WE MUST REVERSE THE CANCEROUS COMBINATION OF SUSTAINED INFLATION AND ECONOMIC DISTRESS WHICH CONTINUES TO DRAIN THE VITALITY OUT OF THE AMERICAN ECONOMY. WE MUST CAPTURE CONTROL OVER THE FEDERAL BUDGET. WE MUST TAKE THE NECESSARY STEPS TO REDUCE THE BUDGET DEFICITS THAT HAVE PLAGUED US FOR YEARS.

WE MUST NOT LOSE SIGHT OF THE SERIOUSNESS OF THE ECONOMIC CHALLENGES FACING OUR COUNTRY. AS CHAIRMAN OF THE COMMITTEE ON ENERGY AND NATURAL RESOURCES, I INTEND TO CONDUCT IN A TIMELY MANNER AN INDEPTH REVIEW OF THE PROGRAMS WITHIN OUR JURISDICTION.

OUR GOAL MUST BE FEDERAL NATURAL RESOURCE PROGRAMS THAT SUPPORT THAT SAME CREATIVITY AND INDIVIDUAL INITIATIVE OF THE AMERICAN PEOPLE THAT MADE OUR COUNTRY GREAT. AS A NATION, OUR CAPABILITY TO SUSTAIN ECONOMIC GROWTH REQUIRES FEDERAL NATURAL RESOURCE POLICIES THAT SUPPORT SOUND ECONOMIC DECISIONS BY THE PRIVATE SECTOR. THROUGH THE BALANCED DEVELOPMENT OF OUR NATURAL RESOURCES WE CAN HELP INSTILL IN THE AMERICAN ECONOMY THE NECESSARY STRENGTH AND VITALITY TO ASSURE ECONOMIC RECOVERY.

IN EXAMINING THE PROPOSED FISCAL YEAR 1983 BUDGET FOR PROGRAMS OF THE DEPARTMENT OF THE INTERIOR, I INTEND TO CLOSELY EXAMINE WHETHER THE PROPOSED FUNDING LEVELS POSITIVELY SUPPORT THE SHORT- AND LONG-TERM STEWARDSHIP OF OUR NATURAL RESOURCES FOR THE BENEFIT OF ALL AMERICANS.

WE ARE PLEASED TO HAVE AS OUR FIRST WITNESS SECRETARY WATT.

The **CHAIRMAN**. I am pleased to have as our first witness Secretary Watt. Senator Melcher, do you have any statement you would like to make before we proceed to hearing the testimony of the witness?

STATEMENT OF HON. JOHN MELCHER, A U.S. SENATOR FROM THE STATE OF MONTANA

Senator **MELCHER**. Thank you, Mr. Chairman. I would like to make several points, and I would like to be able to talk to the Secretary directly and get his responses on them.

First of all, I am curious as to whether or not there are any money proposed in this budget for leasing of the Island Park area for geothermal purposes. It seems to me that we have been hung up on this for a long time; on whether or not there is going to be any modifications of geothermal leases. The biggest sticking point that I can think of is to prevent any damage to the geiser basin in Yellowstone National Park.

Senator Wallop and I were at a hearing in Casper late last year, and it seemed to be our general opinion, at least based on the testimony that was given to us, that any development in Island Park area adjacent to Yellowstone National Park could not assure that there would not be damage to the geiser basin in the park itself.

Second, I am curious about where we are going in terms of coal leases in the Powder River Basin; whether this is leading to speculation, events occurring by people leasing land for coal, federally owned coal, without any prospects of developing those coal leases in the near future.

Third, I am concerned about what provisions we have in the budget for Bonneville Power and what the Secretary's attitude on the Bonneville Power Administration's budget is.

Those are the three points I would like to discuss with the Secretary at some time when we have the opportunity prior to the close of this hearing.

The CHAIRMAN. Thank you, Senator Melcher.

Senator Warner.

Senator WARNER. No, thank you.

The CHAIRMAN. Senator Wallop.

STATEMENT OF HON. MALCOLM WALLOP, A U.S. SENATOR FROM THE STATE OF WYOMING

Senator WALLOP. Mr. Chairman, I want to welcome the Secretary here this morning.

I have had a brief glance at your budget, and some things I find of interest and some things I want to question. I wonder, for example, if the leasing revenues may not be a bit optimistic given the falling oil prices and the increasing presence of a glut, which I think we all recognize is temporary. Nonetheless, there are problems in the oil area. People are finding that the cost of drilling is very much approaching their profit margins, and I just wonder if we may not be anticipating some slowdown in that over the course of next year?

I am also interested in finding out your prospects for your new Minerals Management Division. I think that the effort that has begun on the collection of royalties is an overdue one—not overdue on your part because you haven't had the opportunity to be overdue. It is a timely one on your part, but I do think that the prospects for the country are highly enhanced by that provision.

I share Senator Melcher's concern with the Island Park, however, I do believe that we ought to get on with the geothermal bill and find the means of resolving it so that the rest of the country can share in it's benefits.

Lastly, I am very interested in your proposals and programs for the national park system which I think is well on track to solid restoration. It is a situation that we really should never have allowed to take place. It has declined the general status of the national park in areas such as health, safety, maintenance and repair. If we can restore what we have, then we can confidently look to acquisitions to the park system to enhance it, but to preside over the degradation of what we have and then lust for more seems a short way to go.

Thank you.

The CHAIRMAN. Thank you very much. There are a host of questions I am sure will be asked before we have completed the budgetary process. I think the best thing we can do to get to those questions is allow you to make your statement and then start in.

Secretary WATT. Thank you, Mr. Chairman. I have with me today at the table Assistant Secretary Robin West and Joe Gorrell, Director of our Office of Budget, who will assist us in presenting the statement;

Mr. Chairman, I have a rather lengthly statement that I would like to ask permission to be put in the record in its entirety.

The **Chairman**. It will appear in the record and you may proceed to summarize or highlight as you see fit.

Secretary **Watt**. With the permission of the committee, I would like to read the first several pages in total, and then really start skipping around to highlight, but I would like to ask for the indulgence of the committee to allow me to read the first several pages because they kind of set forth the scenario in which we commence looking at the 1983 budget, and I think deserve attention.

STATEMENT OF HON. JAMES G. WATT, SECRETARY OF THE INTERIOR, ACCOMPANIED BY J. ROBINSON WEST, ASSISTANT SECRETARY OF THE INTERIOR FOR POLICY, BUDGET, AND ADMINISTRATION; AND JOSEPH W. GORRELL, DIRECTOR, OFFICE OF BUDGET

Secretary **Watt**. The 1983 budget request for the Department of the Interior totals $6.025 billion, an increase of $293 million or 5 percent over the 1982 estimate, which excludes fire supplementals and contract authority for the National Park Service.

For the Department's controllable programs, the 1983 budget includes $4.449 billion, an increase of $77 million or 1.8 percent over the 1982 estimate. In addition, the President's budget proposes to transfer to us $1.2 billion from the Department of Energy, and $52 million from the Department of Education.

We estimate that Interior will collect $20.8 billion in receipts in fiscal year 1983. This is almost double the level expected in 1982. Of this total, $18 billion is projected to come from oil and gas leasing on the Outer Continental Shelf.

Overall, the 1983 budget for Interior programs increases funding for energy leasing, improving the Department's royalty management system, restoring and improving national park facilities and water project operation and construction. Increases are also included in 1983 for State revenue sharing payments made possible principally from growing mineral receipts, and for State regulatory and reclamation grants in the Office of Surface Mining.

Increases in the 1983 budget are partially offset by reductions reflecting the streamling of regulatory and administrative activities and improved management of the public lands, a shift from Federal to State emphasis in surface mining programs, decreases in the land acquisition program, and elimination of urban park and recreation rehabilitation grants and historic preservation grants.

Before getting into the specifics of the fiscal year 1983 budget for Interior programs, I would like to talk briefly about what we have accomplished during this past year. In my view, it has been an extraordinary first year for the administration, and with the counsel and assistance of this committee, and particularly you, Mr. Chairman, we have made tremendous progress toward improving the management of our Nation's valuable natural resources. I have handed to you copies of what I call the annual report that has just come off the press this week entitled, "A Year of Change, To Restore America's Greatness." It is with great pride that I have submitted this to the President and to this committee because indeed this last year, the first year of this administration, has been a year of extraordinary accomplishment.

The CHAIRMAN. Could I interject a moment? I did notice that the report is in black and white. Isn't the Department's usual practice to give it in glowing color?

Secretary WATT. Yes; it sure is, four color print, with lots of pictures and pretty things like that.

The CHAIRMAN. Does this represent a savings in cost or are you trying to suggest that the glowing color lies in the prose?

Secretary WATT. I was expecting a question but not from you, Mr. Chairman. I am ready to defend it to the hilt. One of the last ones is this four color print job that has got all kinds of pictures and beauty and splendor. It doesn't relate to much progress for improving America's greatness, I might add, but it is a beautiful book. That cost $186,000 to publish, and ours costs $1,500. We are cutting down every chance we can.

The CHAIRMAN. Thank you. We will look at the prose as well as the pictures.

Secretary WATT. OK. Good. That book outlines some of the positions that we have taken and the progress that we have made.

When I took office in January 1981, I saw that change was needed. Facilities in the national parks had been deteriorating, and our multiple-use lands had not been managed properly. Although our oublic lands have the potential for meeting our energy and strategic minerals needs, we were still relying on foreign sources for much of our crude oil and strategic minerals.

Recognizing these problems, I have worked to bring about a change in a number of areas. For example, I have taken steps to enhance America's ability to meet our energy and minerals needs with domestic resources while continuing to provide adequate environmental safeguards; restore, improve and preserve our national parks; increase the supply and improve the management of our water resources in an effort to avert a water crisis in the next decade; improve State and local relationships with the Federal Government through a good neighbor policy, and bring better government through good management and decisive leadership.

Some of our achievements in the energy area include developing a streamlined 5-year program for leasing the energy reserves of the Outer Continental Shelf, opening up oil and gas leasing in Alaska, both within and outside of the national petroleum reserve, increasing acreage leased and tonnage sold in the coal program, expediting geothermal leasing and development, and moving ahead to establish a permanent oil shale leasing program and a tar sands leasing program.

With regard to minerals, we have returned more than 20 million acres of withdrawn public lands to multiple use, including mineral exploration and development, and initiated development of a new OCS hardrock mineral leasing program.

In our national park system, we have, for example, more than doubled the funding level requested by the previous administration to begin correcting the serious health and safety problems cited in a General Accounting Office study, instituted a near moratorim on adding new units to the park system until needed work in existing parks can be accomplished and previous acquisitions paid for, and encouraged a new partnership with the private sector to improve visitor services.

Our major water-related achievement of the past year was the development of policies to insure long-range water availability. We have encouraged non-Federal hydroelectric development at Federal facilities and have developed proposals to significantly accelerate the Federal water project planning process. We are also moving to replace the cumbersome principles and standards for the review and evaluation of Federal water projects with more flexible and less time-consuming guidelines.

During the past year, we implemented our good neighbor policy. The Sagebrush Rebellion was defused. The war on the West was terminated. We accomplished this in part by returning to the States primary authority to allocate water resources, authorizing the transfer, exchange, or sales of thousands of acres of Federal lands to State and local governments, and enhancing public access to Federal lands. We achieved success in revitalizing efforts to honor States' rightful claims for Federal lands which they were granted upon entering the Union. Mr. Chairman, the statistics supporting these changes are in the book. It makes fascinating reading.

For example, in your State of Idaho, we have transferred most of the lands that you are entitled to. In Arizona we have transferred about 60,000 acres. We will finish that this year. That is 60,000 acres in the last calendar year compared to 196 acres in the last 4 years. There were no acres transferred to Idaho in the last four years prior to our arrival.

The reorganization of the Office of Surface Mining insures that the coal-producing States will have primary authority for enforcing surface mining regulations as Congress spelled out in the Surface Mining Act. We also implemented a new range management policy which, together with the reform of grazing and land use planning regulations, puts taxpayer dollars into those categories of rangeland where the need is greatest and the return to the public is highest.

In addition, we made record payments to State and local governments in the form of shared revenues from energy production and sales of public land resources, and established a new departmental program to collect delinquent oil and gas royalties and share them on a timely basis with the States in which they were earned from Federal lands.

During the past year we made significant progress in improving the management of the Department, in part, by completing a major investigation into allegations of waste and revenue loss resulting from oil and gas royalties, creating a new Minerals Management Service to improve the management of the oil and gas royalties accounting and collection system, reducing administrative expenses by reorganizing the Office of Surface Mining, and eliminating other Departmental functions that were no longer needed.

We merged the HCRS with the National Park Service. We raised the oil and gas filing fee first from $10 to $25 and then to $75. We also undertook a major program of regulatory reform and took steps to streamline Interior's energy and mineral leasing procedures, water development planning, and the EIS process.

It has been a good year for the Department of the Interior and for the Nation, and it has been most gratifying to me that the Congress has supported the changes of policy and direction that we have initiated. I look forward with anticipation to the coming year and believe the 1983 budget we are proposing builds on our accomplishments of the past year.

As I have indicated, one of the Department's highest priorities is to accelerate and streamline its energy leasing activities and encourage the development of the Nation's energy resources in order to strengthen the economy, increase Federal revenue, and reduce our dependence on foreign sources of energy. Operating primarily through the BLM and the newly created MMS, many of the Department's major programs are conducted to enhance the leasing and development of oil, gas, coal, and geothermal resources and to move ahead with the development of oil shale and tar sands resources. The 1983 budget includes $201 million for energy leasing.

I am particularly enthusiastic about the new Minerals Management Service which I created by secretarial order on January 19, 1982, to seek greatly improved collection of royalties from mineral leases on Federal and Indian lands. The basis of the new Service which will report directly to the Minerals Management Board chaired by the Under Secretary, is the former Conservation Division of the Geological Survey. This elevated status will insure greater visibility for the Service's efforts to further tighten site inspections, site security, and auditing and accounting procedures governing Federal and Indian mineral leases. The move will also allow the Geological Survey to focus on geologic research, water resource investigations, topographic mapping, and remote sensing, all areas in which the Survey has an international reputation and scientific excellence. This change will allow the USGS to once again retain its worldwide recognition as the premier scientific and technological entity that it deserves to be.

The 1983 budget assumes implementation of plans to accelerate and streamline oil and gas leasing on the OCS as reflected by my 5-year leasing schedule. I believe this is one of the administration's most important economic and energy proposals. Its objective is to accelerate the inventorying of domestic oil and gas resources, and if discoveries are made, to make them available to the consumers.

Moreover, the OCS program brings in significant revenue to the Federal Government. In fact, receipts have increased dramatically from only $2.2 billion in 1978 to $10 billion in 1981, the first year of the Reagan administration. We estimate receipts of $18 billion from 9 scheduled sales in 1983. Funding increases totaling nearly $6 million will be used to support those sales as well as for environmental studies and areawide oil and gas resource analysis. The extraordinary safety record of the OCS activities will be maintained to accelerate the program.

In addition to developing our offshore oil and gas resources, we are also emphasizing the development of onshore oil and gas. Growing interest on the part of industry in onshore oil and gas leasing and the Department's efforts to accelerate its work in this area are reflected by the increased revenue which is being generated from this activity. Since 1978, receipts from oil and gas leasing on the public lands have grown from about $340 million to more than $1 billion per year projected for 1982 and 1983.

The impact of increasing the filing fee to $75 will be felt in 1983, with fees expected to grow from $44 million to $131 million in 1982 and $188 million in 1983.

We are currently studying the impact of raising royalties from one-eighth to one-sixth in the noncompetitive oil and gas leasing program. As we increase our access to the public lands and increase production, we want to be certain that the Federal Government receives its fair share.

In 1983, we will focus on reducing the backlog of lease applications on the onshore oil and gas program. The Department is proceeding with oil and gas leasing in Alaska, both within and outside of the National Petroleum Reserve. The first planned sale in the NPR-A was held on January 27, with a second sale scheduled for the spring. Efforts being initiated in 1982 will continue in 1983 with regard to the leasing of oil and gas on Federal lands in Alaska which had been closed for this purpose prior to the passage of the Alaska National Interest Lands Conservation Act. A $5 million increase is included in 1983 for the Department's onshore oil and gas program.

The budget for the newly established Minerals Management Service totals $128.5 million, and will receive priority consideration for necessary added funding as required in the months ahead.

Expanded coal production continues to be a major priority of the Department. In fact, annual coal production on Federal lands has increased from 10 million tons, or 1.8 percent of national production, in calendar year 1971, to 69 million tons, or 8.3 percent of national production, in calendar year 1980. The latest estimate for calendar year 1981 is a production level totaling 95 million tons.

Revenue from coal leasing has also increased significantly from $11.9 million in 1978 to $109.5 million in 1983. The leasing schedule provides for holding two lease sales in 1983, in Fort Union and the San Juan River. Efforts to streamline activities in the program and make it more efficient has resulted in budgetary savings of nearly $10 million in 1983. For example, we plan to conduct fewer technical investigations and to defer some lower priority inventory work.

There will also be less need for pre-lease government drilling in 1983 because we will use existing data as the basis for fair market value determinations. We also anticipate a reduction in workload associated with the review of mine plans.

In 1983, I am requesting $191 million for the national park restoration and improvement program to continue to correct major deficiencies in park facilities, and address serious preservation problems.

For fiscal year 1982 I initially asked for $105 million over the $87.3 million requested by the previous administration. Congress appropriated substantial portions of that request. If the Congress votes the full $191 million for 1983, it will augment Park Service efforts to restore and improve the parks during fiscal year 1983. There is very real need to upgrade the national park system since the National Park Service estimates that visits will reach a record 632 million in 1983. This is a 13-percent increase over actual 1981 visits of 321 million.

Senator WALLOP. Excuse me. You may have misspoken—$632 million or 362 million?

Secretary WATT. Excuse me—362; I thank you. It is 362 million.

Senator WALLOP. I know we can't handle that many.

Secretary WATT. It is not growing quite that rapidly. For the National Park Service, we are asking roughly a 10-percent increase for 1983 in moneys to be made available to the Service, and I emphasize that point because the papers this morning have an error on that. We are seeing that moneys are put into the park system for manpower and construction of those facilities needed to preserve the parks and meet the Service's objectives in providing for the visitors. We are not cutting funds to the National Park Service which really is going up $65 million. It relates to getting money for the manpower and to improve the lands which are critical for the system.

The budget also proposes increases in recreation and user fees for areas administered not only by the Park Service but by BLM, Fish and Wildlife Service, and other Federal agencies as well.

We are also proposing that the legislative prohibition on raising Park Service entrance fees be eliminated and that increased receipts be used to augment the National Park Service budget in future years. Our projections show that recreation revenue will more than double from the $23 million projected for 1982.

We are proposing no funding for the categorical grant programs of the land and water conservation fund, the urban park and recreation fund, and the historic preservation fund. These programs primarily produce local benefits and should, therefore, be the responsibility of local governments.

With regard to historic preservation, it should be recognized that the Economic Recovery Tax Act of 1981 provides a 25 percent income tax credit for historic preservation. Over $200 million in such tax credits are estimated for 1983.

I would like to divert from the text to comment on this. Historic preservation is a very popular and attractive subject and you will be lobbied hard to increase appropriations above what we have requested for this program.

Let me assure you that in the marketplace the pressure for acquiring those sites that can be restored as historic preservation projects is immense, and it is because of the 25-percent tax credit. The business community is scouring the country to take advantage of this tax credit in their efforts, and we have seen a flurry of activity of unprecedented dimension. As a result of that, we are asking for an increase of $650,000 for the National Park Service to handle the paperwork that will result from that.

We do not feel that there is need to provide further subsidies to the State organizations or to the private sector to carry out this program that is just overwhelming the marketplace because of the tax credit today. If the States need more money, and some of them may well need more money to carry out their historic preservation programs, there is plenty of opportunity to take the funds from the private sector that is getting this bonanza as a result of the 25-percent tax credit.

With regard to the urban park and recreation fund, we are asking for zero funding of that. In 1982 Congress appropriated $7.7

million for that effort. To date $139 million has been appropriated for that program; $50 million continues to be carried in the bank account for local governments to utilize those urban park and recreation funds that have been obligated by the Federal Government for matching programs to local governments. So let me reiterate, while Congress has made available in the history of that program $139 million, with $7.7 of it for last year, $50 million remains on account unliquidated and not utilized.

With regard to the land and water conservation fund State grant program, we have appropriated no money for that program last year and today we have unobligated $26 million and more than $540 million of obligated funds that have not been spent by State governments even though we have obligated them.

Now last year when I appeared before this committee we talked about $600 million obligated by the Federal Government through HCRS and now the Park Service that had not been utilized by State entities, and in that 1 year less than $100 million has been used. So again, the local and State governments have not shown their capability to commit and spend the moneys that have been appropriated and obligated for the urban park and recreation fund, or for the land and water conservation fund.

With regard to historic preservation funds, on that account we see the private sector moving in such an aggressive and assertive way that it is encouraging to see that we will have a beautiful, historic preservation program, and we will not need to appropriate additional subsidies to make that program go.

With regard to the land and water conservation fund, the 1983 budget includes $69 million from the fund for land acquisition activities of the national park service, BLM, the Fish and Wildlife Service, and the Forest Service. Of course, of this amount $60 million will be used for Park Service land acquisition to pay court awards on lands already taken or condemned by the Federal Government, and for emergency purposes.

Again, let me emphasize this because the press was wrong on this account this morning. We are asking for $69 million to come from the land and water conservation fund, with $60 million of it to go to the National Park Service for acquiring additional lands to be put in the national park system.

The 1983 budget for the Bureau of Reclamation includes an increase of $118 million over 1982 for its construction program for continued work on ongoing projects. The 1983 program will continue construction on 70 projects and preconstruction planning on two projects. Mr. Chairman, let me highlight once again that this budget allows for new reclamation starts in the West, and that is in the plural. The money is being set aside. When we find projects that have local participation and meet our principles and standards, we will be up here asking for authorization and appropriation of the funds that we have set aside for that purpose.

Mr. Chairman, we will continue to be good neighbors, and we will share an additional $163 million over the 1982 level of $594 million in revenue from public land activities such as mineral leasing, timber sales, and grazing. We have also included $45 million for payments in lieu of taxes (PILT), and a legislative proposal will be coming forward to the Congress shortly on that matter.

The working group of the Cabinet Council on Natural Resources and the Environment is focusing on this and we need to pursue the PILT concept, because this administration, as is this committee, is fully committed to that concept of good government where there is a responsibility of ownership, and it must be met.

The budget includes a $10.2 million increase for the Fish and Wildlife Service for minor rehabilitation and cyclical maintenance at national wildlife refuges, hatcheries, and research facilities. Major rehabilitation for service facilities will nearly double in 1983 from the $6.7 million 1982 level, and public use activities on hatcheries and refuges will also increase. In total, this represents more than a $16 million increase for improvement projects at refuges, hatcheries, and research facilities.

The budget includes some reductions which reflect efforts to reduce overhead in lower priority activities, while maintaining services to the field. We are proposing to transfer or close several hatcheries, and also close other fishery assistance and research facilities.

Mr. Chairman, may I once again deviate from my text and talk about fish hatcheries. We are asking the Congress not to fund the continuation of 31 fish hatcheries. This has been an effort that has been attempted in years gone by on repeated occasions by both Republican and Democratic administrations. These fish hatcheries should have been transferred many years ago. They are not essential to maintaining the fisheries from our experts' point of view, and, as a consequence, they have been allowed to deteriorate over the last several years. We have tried to give them to State and local governments, and in most instances that I am personally familiar with, State and local governments do not want those fish hatcheries because they do not meet their needs, but they want us to continue with the fish hatcheries.

Now these 31 fish hatcheries each will employ three, four, five persons in the respective fish hatchery. They are spread out over 23 States, and, therefore, political pressures will be great to continue these projects. We strongly urge that economy be considered, that the fishery be considered, and these facilities are not needed.

Mr. Chairman, I have highlighted and probably taken more time than I should have, but we have a handsome budget for 1983. We are very proud of it. We think it will help us put money into the resource base, to hire the necessary people in the park system, to protect that, and to help develop the energy that consumers of America need and which is available. It is a budget we are proud of, and I am confident that it gives us the necessary manpower to do the job to assure that the resources for wildlife, for parks, and for energy are managed properly, not only for the consumers of this year, but the taxpayers and consumers, and those who enjoy the outdoors for many generations yet to come.

Thank you for letting me present this, and my colleagues and I stand ready to answer any questions that you folks might have.

[The prepared statement and attachments submitted by Secretary Watt follow. Testimony continues on p. 202:]

Statement of James G. Watt, Secretary of the Interior
Before the Senate Committee on Energy and Natural Resources

February 9, 1982

Mr. Chairman and Members of the Committee:

I am pleased to appear before you today to discuss the FY 1983 budget for Interior programs.

The 1983 budget request for the Department of the Interior totals $6.025 billion, an increase of $293 million or 5 percent over the 1982 estimate, which excludes fire supplementals and contract authority for the National Park Service. For the Department's controllable programs, the 1983 budget includes $4.449 billion, an increase of $77 million or 1.8 percent over the 1982 estimate. In addition, the President's budget proposes to transfer to us $1.2 billion from the Department of Energy and $52 million from the Department of Education. We estimate that Interior will collect about $20.8 billion in receipts in FY 1983. This is almost double the level expected in FY 1982. Of this total $18 billion is projected to come from oil and gas leasing on the Outer Continental Shelf.

Overall, the 1983 budget for Interior programs increases funding for energy leasing, improving the Department's royalty management system, restoring and improving National Park facilities, and water project operation and construction. Increases are also included in 1983 for State revenue sharing payments made possible principally from growing mineral receipts, and for State regulatory and reclamation grants in the Office of Surface Mining.

Increases in the 1983 budget are partially offset by reductions reflecting the streamlining of regulatory and administrative activities and improved management of the public lands, a shift from Federal to State emphasis in surface mining programs, decreases in the land acquisition program, and elimination of Urban Park and Recreation Rehabilitation grants and Historic Preservation grants.

Before getting into the specifics of the FY 1983 budget for Interior programs, I would like to talk briefly about what we have accomplished during the past year. In my view, it has been an extraordinary first year for the Administration and, with the counsel and assistance of this Committee, we have made tremendous progress toward improving the management of our Nation's valuable natural resources.

When I took office in January 1981, I saw that change was needed. Facilities in the National Parks had been deteriorating and our multiple-use lands had not been managed properly. Although our public lands have the potential for meeting our energy and strategic minerals needs, we were still relying on foreign sources for much of our crude oil and strategic minerals.

Recognizing these problems, I have worked to bring about change in a number of areas. For example, I have taken steps to:

o Enhance America's ability to meet our energy and minerals needs with domestic resources, while continuing to provide adequate environmental safeguards;

- Restore, improve, and preserve our National Parks;
- Increase the supply and improve the management of water resources in an effort to avert a water crisis in the next decade;
- Improve State and local relationships with the Federal Government through a "good neighbor" policy; and
- Bring better government through good management and decisive leadership.

Some of our achievements in the energy area include developing a streamlined five-year program for leasing the energy reserves of the Outer Continental Shelf; increasing the number of onshore oil and gas leases issued and acres leased; opening up oil and gas leasing in Alaska, both within and outside of the National Petroleum Reserve; increasing acreage leased and tonnage sold in the coal program; expediting geothermal leasing and development; and moving ahead to establish a permanent oil shale leasing program and a tar sands leasing program. With regard to minerals, we have returned more than 20 million acres of withdrawn public lands to multiple use, including mineral exploration and development; and initiated development of a new OCS hardrock mineral leasing program.

In our National Park System, we have, for example, more than doubled the funding level requested by the previous Administration to begin correcting the serious health and safety problems cited in a General Accounting Office Study; instituted a near-moratorium on adding new units to the park system until needed work in existing parks can be accomplished and previous acquisitions paid for; and encouraged a new partnership with the private sector to improve visitor services.

Our major water-related achievement of the past year was the development of policies to ensure long-range water availability. We have encouraged non-Federal hydroelectric development at Federal facilities and have developed proposals to significantly accelerate the Federal water project planning process. We are also moving to replace the cumbersome Principles and Standards for the review and evaluation of Federal water projects with more flexible and less time-consuming guidelines.

During the past year, we implemented our "good neighbor" policy. The Sagebrush Rebellion has been defused. We accomplished this, in part, by returning to the States primary authority to allocate water resources; authorizing the transfer, exchange, or sale of thousands of acres of Federal lands to State and local governments; and enhancing public access to Federal lands. We achieved success in revitalizing efforts to honor States' rightful claims for Federal lands which they were granted upon entering the Union. The reorganization of the Office of Surface Mining ensures that coal-producing States will have primary authority for enforcing surface mining regulations, as Congress spelled out in the Surface Mining Act. We also implemented a new range management policy which, together with the reform of grazing and land use planning regulations, puts taxpayer dollars into those categories of rangeland where the need is greatest and the return to the public is highest. In addition, we made record payments to State and local governments in the form of shared revenues from energy production and sales of public land resources, and established a new Departmental program to collect delinquent oil and gas royalties and share them on a timely basis with the States in which they were earned from Federal lands.

During the past year, we made significant progress in improving the management of the Department, in part, by completing a major investigation into allegations of waste and revenue loss resulting from oil and gas royalties; creating a new Minerals Management Service to improve the management of the oil and gas royalties accounting and collection system; reducing administrative expenses by reorganizing the Office of Surface Mining; and eliminating other Departmental functions that were no longer needed. We merged the Heritage Conservation and Recreation Service with the National Park Service. We raised the oil and gas filing fee first from $10 to $25 and then to $75. We also undertook a major program of regulatory reform and took steps to streamline Interior's energy and mineral leasing procedures, water development planning, and the Environmental Impact Statement process.

It has been a good year for the Department of the Interior and for the Nation, and it has been most gratifying to me that the Congress has supported the changes of policy and direction that we have initiated. I look forward with anticipation to the coming year and believe the 1983 budget we are proposing builds on our accomplishments of the past year.

As I have indicated, one of the Department's highest priorities is to accelerate and streamline its energy leasing activities and encourage the development of the Nation's energy resources in order to strenghthen the economy, increase Federal revenue, and reduce our dependence on foreign sources of energy. Operating primarily through the Bureau of Land Management and the newly created Minerals Management Service, many of the Department's major programs are conducted to enhance the leasing and development of oil, gas, coal, and geothermal resources and to move ahead with the development of oil shale and tar sands resources. The 1983 budget includes $201 million for energy leasing.

I am particularly enthusiastic about the new Minerals Management Service which I created by Secretarial Order on January 19, 1982, to seek greatly improved collection of royalties from mineral leases on Federal and Indian lands. The basis of the new Service, which will report directly to the Minerals Management Board chaired by the Under Secretary, is the former Conservation Division of the Geological Survey. This elevated status will ensure greater visibility for the Service's efforts to further tighten site inspections, site security, and auditing and accounting procedures governing Federal and Indian mineral leases. The move will also allow the Geological Survey to focus on geologic research, water resource investigations, topographic mapping, and remote sensing, all areas in which the Survey has an international reputation and scientific excellence.

The 1983 budget assumes implementation of plans to accelerate and streamline oil and gas leasing on the Outer Continental Shelf as reflected by my proposed five-year schedule. I believe that this is one of the Administration's most important economic and energy proposals. Its objective is to accelerate the inventorying of domestic oil and gas resources and, if discoveries are made, to make them available to U.S. consumers earlier. Moreover, the OCS program brings in significant revenue to the Federal Government. In fact, receipts have increased dramatically, from only $2.2 billion in 1978 to $10.1 billion in 1981, the first year of the Reagan Administration. We estimate receipts of $18 billion from 9 scheduled sales in 1983. Funding increases totalling nearly $6 million will be used to support these sales as well as for environmental studies and area-wide oil and gas resource analysis. The extraordinary safety record of the OCS activities will be maintained as we accelerate the program.

In addition to developing our offshore oil and gas resources, we are also emphasizing the development of onshore oil and gas. Growing interest on the part of industry in onshore oil and gas leasing and the Department's efforts to accelerate it's work in this area are reflected by the increased revenue which is being generated from this activity. Since 1978, receipts from oil and gas leasing on the public lands have grown from about $340 million to more than $1 billion per year projected for 1982 and 1983. The impact of increasing the filing fee to $75 will also be felt in 1983, with fees expected to grow from $44 million in 1981 to $131 million in 1982 and $188 million in 1983. We are currently studying the impact of raising royalties from 1/8 to 1/6 in the noncompetitive oil and gas leasing program. As we increase access to the public lands and increase production, we want to be certain that the Federal Government receives its fair share.

In 1983 we will focus on reducing the backlog of lease applications in the onshore oil and gas program. The Department is also proceeding with oil and gas leasing in Alaska, both within and outside of the National Petroleum Reserve. The first planned sale in the NPR-A was held on January 27, with a second sale scheduled for this spring. Efforts being initiated in 1982 will continue in 1983 with regard to the leasing of oil and gas on Federal lands in Alaska which had been closed for this purpose prior to the passage of the Alaska National Interest Lands Conservation Act. A $5 million increase is included in 1983 for the Department's onshore oil and gas program.

The budget for the newly established Minerals Management Service totals $128.5 million, and will receive priority consideration for necessary added funding as required in the months ahead.

Expanded coal production continues to be a major priority of the Department. In fact, annual coal production on Federal lands has increased from 10.1 million tons, or 1.8 percent of national production in calendar year 1971, to 69.1 million tons, or 8.3 percent of national production, in calendar year 1980. The latest estimate for calendar year 1981 is a production level totalling about 95 million tons. Revenue from coal leasing has also increased significantly, from $11.9 million in 1978 to a projected $90.4 million in 1982 and $109.5 million in 1983.

The coal leasing schedule provides for holding two lease sales in 1983 in Fort Union and the San Juan River. Efforts to streamline activities in the program and make it more efficient have resulted in budgetary savings of nearly $10 million in 1983. For example, we plan to conduct fewer technical investigations and to defer some lower priority inventory work. There will also be less need for pre-lease government drilling in 1983 because we will use existing data as the basis for fair market value determinations. We also anticipate a reduction in workload associated with the review of mine plans.

In 1983, we anticipate increased activity regarding the development of geothermal resources, primarily because of recent Departmental policy decisions setting time limits for processing noncompetitive lease applications, holding competitive lease sales for all unleased known geothermal resource areas and implementing a simultaneous leasing procedure which allows relinquished leases to be reoffered. Additional funds in 1983 will be used to issue more simultaneous noncompetitive leases and to expand post-lease activities.

For 1983, we will continue work on the prototype oil shale leasing program and establish a permanent oil shale leasing program. The first prototype oil shale leases since 1974 are proposed to be issued in 1983 and the first lease sale under the permanent program is scheduled to be held in March 1984. We will also continue our work on a tar sands leasing program with the objective of holding the first lease sale early in 1984.

The proposed budget for the Bureau of Mines includes $2.6 million in increased funding for research to improve the recovery and conservation of critical and strategic minerals such as chromium, cobalt, nickel, and tungsten. Another increase of $1.3 million is included for the U.S. Geological Survey's mineral resource surveys for an accelerated program of geologic research to assist in the identification and delineation of new deposits of these minerals.

An $8.2 million reduction is proposed for the Bureau of Mines' minerals health and safety technology program as we shift our research emphasis toward high risk areas with long-term payoffs. A $4.2 million reduction is also proposed for the minerals environmental technology program.

With regard to the Bureau of Mines, on February 1, I issued three Secretarial Orders which generally reorganized the Bureau and transferred the Mined Lands Demonstration and Reclamation Projects function from Mines to the Office of Surface Mining. In keeping with the Congressional mandate in the FY 1982 Appropriation Act, I also transferred the Minerals Institutes program from the Office of Surface Mining to the Bureau of Mines. However, we are proposing to terminate grant funding for the Institutes in 1983, because they are not uniquely Federal and other sources of public and private support should be available to them.

In 1983 I am requesting $191 million for the National Park Restoration and Improvement program to continue to correct major deficiencies in Park facilities and address serious preservation problems. For FY 1982, I initially asked for $105 million over the $87.3 million requested by the previous Administration. In September 1981, the President reduced the FY 1982 request to $92.4 million, as part of an overall budget reduction. Congress appropriated $76 million of the original request. If the Congress votes the full $191 million for 1983, it will augment Park Service efforts to restore and improve the parks during FY 1983. There is a very real need to upgrade the National Park System since the National Park Service estimates that visits will reach a record of 362 million in 1983. This is a 13 percent increase over actual 1981 visits of 321 million.

The budget also proposes increases in recreation, entrance, and user fees for areas administered not only by the Park Service, but by the Bureau of Land Management, the Fish and Wildlife Service, and other Federal agencies as well. We are also proposing that the legislative prohibition on raising Park Service entrance fees be eliminated and that increased receipts be used to augment the Park Service budget in future years. Our projections show that recreation revenue will more than double from the $23 million projected for 1982.

We are proposing no funding for the categorical grant programs of the Land and Water Conservation Fund, the Urban Park and Recreation Fund, and the Historic Preservation Fund. These programs primarily produce local benefits and should, therefore, be the responsibility of local governments. With regard to historic preservation, it should be recognized that the Economic Recovery Tax Act of 1981, provides a 25 percent income tax credit for historic preservation. Over $200 million in such tax credits are estimated for 1983.

With regard to the Land and Water Conservation Fund, the 1983 budget includes $69 million from the Fund for land acquisition activities of the National Park Service, Bureau of Land Management, Fish and Wildlife Service, and the Forest Service. Of this amount, $60 million will be used for Park Service land acquisition to pay court awards on lands already taken or condemned by the Federal Government and for emergency purchases.

The 1983 budget for the Bureau of Reclamation includes an increase of $118 million over 1982 for its construction program for continued work on ongoing projects. The 1983 program will continue construction on 70 projects, and preconstruction planning on two projects.

The President's budget includes a contingency allowance to initiate construction of new water resources projects. A budget amendment will be proposed for new construction starts that meet the Administration's criteria for non-Federal financing and cost-sharing and which are economically and financially sound.

Our 1983 program also includes, for the first time, funds in Reclamation's General Investigation program for advance planning for construction in order to permit completion of preauthorization activities prior to Congressional authorization for construction. Under this procedure, we will be able to shorten the lead time in the planning process prior to beginning construction on new projects. We are also requesting nearly $26 million in 1983 to continue work in the Safety of Dams program.

The Geological Survey's continuing program of water resource investigations will be expanded particularly in the areas of acid rain and toxic waste so that the Nation's water resources can be appraised and we can be assured that the water data necessary to develop and manage these resources are available when needed.

The 1983 budget does not include a request for funding for the Office of Water Research and Technology. However, its two reimbursable programs, which provide assistance and expertise in the development of desalination projects in Israel and Saudi Arabia, will be administered by the Bureau of Reclamation in 1983.

We will continue to be a good neighbor in 1983. We will share an additional $163 million over the 1982 level of $594 million in revenue from public lands activities such as mineral leasing, timber sales, and grazing fees. We have also included $45 million for payments in lieu of taxes as a legislative proposal for later transmittal. A working group of the Cabinet Council on Natural Resources and the Environment has recently been designated to review, among other things, all revenue sharing, including PILT. We would anticipate an initiative on this later this year, and look forward to working with the Congress on this issue.

The Bureau of Land Management's 1983 program will reflect our efforts to implement sound management concepts and practices on the public lands and open the Federal lands to public access for appropriate uses. For example, increases are proposed to process additional rights-of-ways related to energy development and transmission lines, to process land cases in the Lower 48 states, and to process additional Native allotments in Alaska. We will also continue to convey 13 million acres per year to the State of Alaska during 1983.

As a result of our more efficient management of the public lands, we are able to recommend cost-savings in several programs administered by the BLM. For example, Bureau efforts to streamline its withdrawal processing and review result in budgetary savings while still meeting the 1991 statutory deadline for completing these reviews. Emphasis in the Bureau's rangeland management program will continue to be on compliance with the court-ordered schedule for environmental impact statements, but funding reductions of $7.7 million will be possible as the Bureau moves from intensive single-year inventories as the basis for decisions on whether or not livestock reductions are needed to use supervision and multi-year monitoring of range conditions. In addition, livestock operators will assume to a greater extent the responsibility for the cost of maintaining range improvements.

The 1983 budget for the Office of Surface Mining projects that all but three coal-producing States will have assumed primacy for regulating coal mining operations within their boundaries by the beginning of FY 1983. It is also anticipated that two additional States will assume this responsibility in FY 1983, leaving Georgia as the only State that will have a direct Federal program, reflecting that State's decision not to have a State program. We consider this, one of the Department's most significant accomplishments, as we expect greater local control, increased environmental safeguards, and increased production through less burdensome regulations. This policy will have a major impact on Federal-State relations.

For OSM's regulatory programs, the 1983 budget includes a significant increase of more than one-third over 1982 levels in the amount of grant money provided to States to assist them with their efforts in assuming primary responsibility for coal mining operations within their borders. This change is consistent with the Administration's overall effort to reduce the level of Federal involvement in matters which can be better handled by State and local governments. I expect favorable consideration will be given to a supplemental request should States demonstrate a need for and capability to administer additional grant funds in 1983.

The budget includes nearly $20 million in increased funds to be made directly available to the States to carry out their reclamation work, together with an offsetting reduction in funds requested for direct Federal reclamation work.

The 1983 Fish and Wildlife Service budget includes a $10.2 million increase for minor rehabilitation and cyclical maintenance at 203 National Wildlife Refuges, 37 National Fish Hatcheries, and three National Research Laboratories. Major rehabilitation for Service facilities will nearly double in 1983 from the $6.7 million 1982 level, and public use activities on refuges and hatcheries will also increase. In total, this represents more than a $16 million increase for improvement projects at refuges, hatcheries, and research facilities. The budget includes some reductions which reflect efforts to reduce overhead and lower priority activities, while maintaining services to the field. We propose to transfer or close several hatcheries and also close other fishery assistance and research facilities.

Regarding our Territorial programs, the 1983 budget emphasizes the continued political and economic development of the Flag Territories and a relationship of free associations between the United States and the governments of Micronesia, and the resettlement of Bikini Islanders. We are seeking a $21 million 1982 supplemental appropriation for the Bikini resettlement. This request would provide for the relocation and resettlement of the displaced Bikini Islanders until such time as the radiation hazards on Bikini Atoll have abated sufficiently to permit their safe return to their home Atoll. Overall, the 1983 budget is lower than the 1982 level, primarily because of near completion of several construction programs during 1982.

In addition, the Interior portion of the President's budget includes funds for programs the President is proposing to transfer from the Departments of Energy and Education. These programs include the Naval Petroleum and Oil Shale Reserves, the Strategic Petroleum Reserve, and the Power Marketing Administrations from Energy, and the Indian Education and Impact Aid Construction programs from Education. The budgets for those programs were developed by their current organizations, and their leadership will be testifying on them.

Mr. Chairman, this concludes my prepared remarks. I do, however, enlist your continuing support in making this year as successful as the previous year has been in carrying out our mutual objectives for this Nation. For your information, I have attached tables summarizing total funding for Interior programs as well as funding for programs under the jurisdication of this Committee.

(in thousands of dollars)

Bureaus/Offices	Budget Authority 1981 Actual	 1982 Estimate	 1983 Estimate	Outlays 1981 Actual	 1982 Estimate	 1983 Estimate
LAND AND WATER RESOURCES						
Bureau of Land Management	1,035,414	1,139,082	1,256,330	1,031,890	1,118,221	1,230,089
Bureau of Reclamation	795,149	771,213	950,320	773,026	843,123	946,150
Office of Water Research & Technology	27,330	10,636	--	33,082	25,986	4,635
Total, Land & Water Resources	1,857,893	1,920,931	2,206,650	1,837,998	1,987,330	2,180,874
FISH AND WILDLIFE AND PARKS						
Fish and Wildlife Service	427,552	419,755	416,103	466,170	409,942	386,323
National Park Service	857,780	753,319	736,278	1,173,155	1,220,510	990,167
Total, Fish and Wildlife and Parks	1,285,332	1,173,074	1,152,381	1,639,325	1,630,452	1,376,490
ENERGY AND MINERALS						
Geological Survey	623,059	496,741	517,850	609,501	572,711	519,905
Bureau of Mines	143,011	151,402	125,476	159,067	153,301	136,100
Office of Surface Mining	177,964	160,597	159,822	131,151	136,966	146,348
Total, Energy and Minerals	944,034	808,740	803,148	899,719	862,978	802,353
Bureau of Indian Affairs	1,776,501	1,511,408	1,600,035	1,468,639	1,364,458	1,424,309
Territorial & International Affairs	238,803	241,749	187,776	310,047	246,039	223,055
Office of the Solicitor	17,908	17,600	19,071	17,359	17,071	18,498
Office of the Secretary	85,016	58,472	55,557	77,254	59,901	57,422
Subtotal, Department of the Interior	6,205,487	5,731,974[a]	6,024,618	6,250,341	6,168,229[a]	6,083,001
Department of Education Transfer	104,545	80,597	51,957	66,589	96,876	86,433
Department of Energy Transfer	3,726,837	930,088	1,188,090	4,136,196	717,809	1,094,986
TOTAL, DEPARTMENT OF THE INTERIOR	10,036,869	6,742,659	7,264,665	10,453,126	6,982,914	7,264,420

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[a] FY 1982 Budget Authority excludes $71 million for proposed FY 1982 fire suppression supplementals and $30 million in Contract Authority - Land and Water Conservation Fund. Outlays have been adjusted accordingly.

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Office of Budget
February 3, 1982

DEPARTMENT OF THE INTERIOR

Analysis of Budget Authority by Senate Legislative Committee

(In millions of dollars)

	FY 1981 Actual			FY 1982, Appropriation To Date			FY 1983 Budget			Total Change FY 1983 - FY 1982
	Controllable	Uncontrollable	Total	Controllable	Uncontrollable	Total	Controllable	Uncontrollable	Total	
A. Under the Cognizance of the Senate Energy and Natural Resources Committee:										
Bureau of Land Management	586	449	1,035	532	607	1,139	485	771	1,256	
Bureau of Reclamation	786	9	795	760	11	771	934	16	950	
National Park Service (all except John F. Kennedy Center)	851	2	853	747	2	749	730	2	732	
Fish and Wildlife - Resource Management	235	3	238	236	4	240	220	4	224	
Geological Survey	623	--	623	497	--	497	518	--	518	
Bureau of Mines	142	--	143	150	1	151	125	1	126	
Office of Surface Mining	178	1	178	161	--	161	160	--	160	
Territorial & International Affairs	173	66	239	188	54	242	134	54	188	
Office of the Solicitor	18	--	18	18	--	18	19	--	19	
Office of the Secretary	85	--	85	58	--	58	56	--	56	
Interior, Subtotal	3,677	530	4,207	3,347	679	4,026	* 3,381	848	4,229	+203
Energy Programs, Subtotal	3,727	--	3,727	930	--	930	1,188	--	1,188	+258
Total before Senate Committee	7,404	530	7,934	4,277	679	4,956	4,569	848	5,417	+461

* Excludes Fire Supplementals of $64 million (BLM: $60 million; NPS: $2.2 million; F&W: $1.8 million) and NPS contract authority of $30 million.

DEPARTMENT OF THE INTERIOR

Analysis of Budget Authority by Senate Legislative Committee

(In millions of dollars)

	FY 1981 Actual			FY 1982, Appropriation To Date			FY 1983 Budget			Total Change FY 1983 - FY 1982
	Controllable	Uncontrollable	Total	Controllable	Uncontrollable	Total	Controllable	Uncontrollable	Total	
B. Under Other Senate Committees:										
1. Environment and Public Works:										
Office of Water Research & Technology	27	--	27	11	--	11	--	--	--	
National Park Service										
John F. Kennedy Center	5	--	5	4	--	4	4	--	4	
Fish and Wildlife Service	(44)	(146)	(190)	(14)	(165)	(179)	(13)	(179)	(192)	
Construction	35	--	35	7	--	7	13	--	13	
Migratory Bird Conservation Account	1	15	16	1	16	17	--	16	16	
National Wildlife Refuge Fund	8	6	14	6	4	10	--	4	4	
Misc. Permanent Appropriations	--	125	125	--	145	145	--	159	159	
Subtotal	76	146	222	29	165	194	17	179	196	+ 2
2. Select Committee on Indian Affairs										
Bureau of Indian Affairs	1,252	629	1,881	1,077	515	1,592*	1,104	548	1,652	+ 60
GRAND TOTAL, DEPARTMENT OF THE INTERIOR	8,732	1,305	10,037	5,383	1,359	6,742	5,690	1,575	7,265	+523
GRAND TOTAL, DEPARTMENT OF THE INTERIOR (NO EXCLUSIONS; TIES TO OMB TOTALS)	8,732	1,305	10,037	5,484	1,359	6,843	5,690	1,575	7,265	+422

* Excludes $7.0 million fire supplemental.

Office of Budget
February 8, 1982

DEPARTMENT of the INTERIOR
news release

OFFICE OF THE SECRETARY

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list of contacts.)

For Release Noon, EST, February 8, 1982. All material in this release is embargoed until that time.

INTERIOR BUDGET CALLS FOR INCREASED FUNDING OF NATIONAL PARKS, WESTERN WATER, MINERALS DEVELOPMENT; ECONOMIES REQUESTED IN MANY OTHER ACTIVITIES

The Interior Department is requesting budget increases for fiscal 1983 to continue construction of essential water projects in the West, upgrade deteriorated facilities at national parks, and improve access to energy and other minerals on multiple-use Federal lands, Secretary of the Interior James Watt said today.

Another significant budget initiative is increased grants to States for surface mining regulation and abandoned mine land restoration, the Secretary said.

At the same time, Interior is asking Congress for less spending on other ongoing programs in keeping with the overall austerity of President Reagan's FY 1983 budget. Thus, the sums requested for a majority of Interior agencies register a decrease from the funding voted them by Congress for the current fiscal year.

Interior's 1983 budget requests total $6,024,618,000 (excluding activities expected to be transferred from the Departments of Energy and Education under reorganization plans soon to be proposed). This is a net increase of about $293 million over the comparable FY 1982 budget level of $5,731,974,000.

"Some otherwise desirable programs will have to make do with less money until the national economy is on firmer footing," Secretary Watt said. "We have instituted tighter management controls across the board to make the best use of the limited funding available. Of the activities recommended for increases, several promise to increase jobs and prosperity, reduce our energy and mineral dependence on foreign sources, and return more money to the Treasury; others represent better stewardship of federally-owned lands and resources, notably in our national parks; and still others demonstrate our commitment to Interior's responsibilities toward Indian tribes.

"The fact that we are able to request relatively modest increases for FY'83 reflects the success of our deep budget cutting during FY'81 and '82," the Secretary said. "Still, that certainly does not mean that the cost squeeze is ended. We will keep our commitments to essential activities by exerting constant heavy downward pressure on nonessential costs, continually making reductions wherever possible."

Interior estimates that it will receive about $20.5 billion in receipts in FY 1983. This is almost double the level expected in FY 1982. The increased FY 1983 receipts include $18 billion projected to come from revenues from oil and gas leases on the Outer Continental Shelf.

One potential source of additional revenues is the new Minerals Management Service (MMS), which will seek greatly improved collection of royalties from mineral leases on Federal and Indian lands. The Minerals Management Service has assumed responsibility for supervision of mineral leases from the former Conservation Division of the U.S. Geological Survey, from which it was formed by order of the Secretary on January 19. It is budgeted initially for $128.5 million--including an increase of $6.4 million targeted for improved royalty management systems. (Details may be found under the Geological Survey heading in the Department's detailed budget documents.) MMS will receive priority consideration for necessary added funding in the months ahead.

Highlights of the new budget requests include:

---$191 million to continue Secretary Watt's national park restoration and improvement program (PRIP) to correct major deficiencies in park facilities and address serious resource preservation problems. Watt initially asked for a $105 million increase in FY 82 over the $87.3 million requested by the previous Administration. If Congress votes the full $191 million for PRIP for FY 83, it will augment the NPS efforts to restore and improve the parks during fiscal 1983.

The fiscal 1983 total proposed for restoration and improvement, including base funding, provides $67 million for small scale maintenance, rehabilitation, and historic preservation projects; $124 million is earmarked for major capital improvements involving 46 projects in 40 parks. These projects include the rehabilitation of water and sewer systems, the reconstruction of unsafe roads and bridges, fire and safety improvements in public facilities, and the preservation of important historic structures.

---$24.6 million in operating increases for park areas to restore programs curtailed over the years due to inflationary pressures on park budgets--programs ranging from routine and special maintenance to law enforcement and including scientific research to improve park resource protection, better evaluation of concessions management, and interpretive activities to enhance park visitors' understanding of park values. New parkland acquisition would be severely limited, however, in line with the Watt policy of emphasizing better stewardship of lands already owned.

---$118 million more than in FY 82 for the construction program of the Bureau of Reclamation in the 17 contiguous Western States for work on 70 projects, including new rehabilitation and betterment work on four projects, and to conduct pre-construction work on two projects. The largest of the works under way include the Central Arizona Project; Bonneville Unit of the Central Utah Project; Central Valley Project, California; Colorado River Basin Salinity Control Projects; Columbia Basin Project, Washington; and McGee Creek Project, Oklahoma. A $17 million increase is proposed for continuation of 10 loan projects; and 13 new investigations would be undertaken emphasizing energy production, municipal and industrial water supplies, and Indian water development; plus 11 new advance planning studies, proposed in a manner intended to shorten considerably the time needed to prepare a project for construction.

---Watt said the President's 1983 budget includes a contingency allowance for initial work on new Bureau of Reclamation construction starts--as yet undesignated--which will meet the Administration's criteria for cost sharing and non-Federal financing. The new starts will be selected from among projects authorized but never funded, after the Administration adopts new guidelines defining cost sharing and related criteria.

---Funds requested for the Office of Surface Mining would change only slightly from FY 82 levels overall, but significant changes would take place in how the money is allocated. Grants to States would rise to $111.9 million, one-third more than in FY 82, as the States achieve primacy for their regulatory and mined land reclamation programs, as provided in the 1977 Surface Mining Act. These increases would be offset by reductions in the funding for direct Federal programs. OSM's total budget for FY 83 is $159.8 million, down slightly from the $160.6 million appropriated for FY 82.

---A $4.2 million increase for the Bureau of Land Management (BLM) to accelerate its Outer Continental Shelf leasing program; plus a $4.1 million increase to help BLM prepare for more onshore oil and gas leasing; and a nearly $1 million increase for oil shale leasing and steps toward a 1984 tar sand leasing program.

---U.S. Geological Survey is earmarked for a $21.1 million total increase above FY 82, largely for such programs as mineral resource surveys, applied and basic geological research, oil and gas and coal resource information, water resource investigations (principally for acid rain and toxic wastes), and the operation and maintenance of the Barrow, Alaska gas fields. The $21.1 million includes the $6.4 million increase mentioned previously for improved royalty management in the new Minerals Management Service, formerly USGS' Conservation Division.

---National wildlife refuges, national fish hatcheries, and wildlife research facilities would receive a $10.2 million increase for minor rehabilitation and increased cyclical maintenance. Major rehabilitation would be increased by $6 million.

---The appropriation request for Indian Affairs exceeds 1982 funding by $88.6 million, after excluding programs to be transferred from the Department of Education. The request reflects a net increase of $47 million for operations over the FY 1982 level of $802 million. This net increase includes $2.2 million for eduction; $15.2 million for services such as welfare payments, law enforcement, housing and similar programs and also including $5 million for a new initiative intended to improve the management capability of small tribes; $13.7 million for economic development and employment including $10 million for a new economic development initiative; $9.5 million for natural resources development; $1.3 million for the Federal Government's trust responsibilities; $10 million for facilities maintenance; $11.1 million for general administration; and a decrease of $16 million for overhead. Another increase is in facility construction (+$12.4 million). Road construction decreases by $3.6 million. Indian trust funds are increased by $32.8 million to a total of $601 million.

---Operating budgets for the U.S. territories and the Trust Territory of the Pacific Islands will be slightly higher than in FY 82, although the total amount requested for Territorial and International Affairs will show a $30 million decline; most of the reductions actually represent non-recurring expenditures for capital improvements such as completion of a hospital in the Virgin Islands, which is receiving $21.5 million in FY 1982, and a number of projects in Guam, American Samoa and the Trust Territory. However, sums are included for FY 83 for territorial development projects including the first phases of a hospital for the Northern Marianas ($4 million) and capitals for the emerging governments of Micronesia ($7.8 million).

---Bureau of Mines Minerals Resources Technology research on strategic and critical materials is increased in FY 1983 by $2.6 million even though the Bureau's overall research program is significantly reduced.

Reductions requested from FY 1982 appropriations include:

---National Park Service: Land acquisition, a new request of $59.8 million, providing funds for deficiency awards, emergency acquisitions and overhead costs; Urban Park and Recreation Rehabilitation grants, zero-budgeted for 1983 compared with a $7.7 million appropriation in FY 82; historic preservation grants to States and to National Trust for Historic Preservation, zero-budgeted compared with $25.4 million current level.

---U.S. Geological Survey: Program reductions include earthquake and volcano hazards investigation down by $4.6 million; uranium and thorium energy investigations down by $4.7 million; geothermal investigations down by $1.9 million; oil shale investigations down $1.5 million; and Federal coal drilling down by $3.0 million.

---Office of Water Research and Technology: Down $10.6 million. The programs are proposed for termination.

---Payments in Lieu of Taxes by BLM to local governments: Down $56.3 million to a new total of $45 million, with legislative changes proposed for later transmittal to Congress. The reduction includes $5.8 million for National Wildlife Refuge lands.

---U.S. Fish and Wildlife Service: $14.9 million less for land acquisition; $4.4 million cut by discontinuing cooperative research units; a reduction of $2.8 million for other research, and animal damage control reduced $1.7 million. Thirty-one fish hatcheries would be transferred to States or closed down for a $3.7 million saving--but none of the 31 would be hatcheries that primarily produce for anadromous or Great Lakes fisheries, or for Federal mitigation or endangered species restoration.

---BLM range management: Down $4.4 million, partly by transferring some maintenance costs to range users. Forest management also would be trimmed by $2.1 million by curtailing activities in marginal timber-growing areas outside the highly productive western Oregon timber lands. Rangeland improvements financed from 50% of grazing fee receipts will drop $2.2 million because grazing fees for 1982 have been reduced pursuant to the statutory formula, largely reflecting recent declines in livestock prices paid to ranchers.

---The FY 1983 budget for the Bureau of Mines is reduced by $25.9 million. Approximately $4.0 million of this decrease is attributable to one-time funding that was in the Bureau's FY 1982 budget for construction of facilities. Another $9.2 million results from the Department's decision to discontinue funding of Mineral Institutes in FY 1983. Funding for the Bureau's mineral information program is reduced by $2.5 million. The remaining budget reductions are achieved through curtailment of Bureau research and development projects. In general, federally funded research and development by the Bureau would be limited to high-risk projects with long-term payoff.

The President's Budget for Interior includes some programs proposed to be transferred from the Departments of Energy and Education. The Energy programs are the Strategic Petroleum Reserve, the Naval Petroleum and Oil Shale Reserves, and the five power marketing administrations, with total FY 1983 budget requests of approximately $1.2 billion, an increase of $258 million over the FY 1982 estimated level of $930 million. The Education programs, which are included with the Department's Bureau of Indian Affairs budget request, are the Indian Education Assistance Program and Impact Aid for Indian school construction, with a combined FY 1983 budget request of $52 million, a decrease of $29 million from the estimated FY 1982 President's budget request.

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DEPARTMENT OF THE INTERIOR

Budget Authority and Outlays

(in thousands of dollars)

Bureaus/Offices	Budget Authority 1981 Actual	Budget Authority 1982 Estimate	Budget Authority 1983 Estimate	Outlays 1981 Actual	Outlays 1982 Estimate	Outlays 1983 Estimate
LAND AND WATER RESOURCES						
Bureau of Land Management	1,035,414	1,139,082	1,256,330	1,031,890	1,118,221	1,230,089
Bureau of Reclamation	795,149	771,213	950,320	773,026	843,123	946,150
Office of Water Research & Technology	27,330	10,636	—	33,082	25,986	4,635
Total, Land & Water Resources	1,857,893	1,920,931	2,206,650	1,837,998	1,987,330	2,180,874
FISH AND WILDLIFE AND PARKS						
Fish and Wildlife Service	427,552	419,755	416,103	466,170	409,942	386,323
National Park Service	857,780	753,319	736,278	1,173,155	1,220,510	990,167
Total, Fish and Wildlife and Parks	1,285,332	1,173,074	1,152,381	1,639,325	1,630,452	1,376,490
ENERGY AND MINERALS						
Geological Survey	623,059	496,741	517,850	609,501	572,711	519,905
Bureau of Mines	143,011	151,402	125,476	159,067	153,301	136,100
Office of Surface Mining	177,964	160,597	159,822	131,151	136,966	146,348
Total, Energy and Minerals	944,034	808,740	803,148	899,719	862,978	802,353
Bureau of Indian Affairs	1,776,501	1,511,408	1,600,035	1,468,639	1,364,458	1,424,309
Territorial & International Affairs	238,803	241,749	187,776	310,047	246,039	223,055
Office of the Solicitor	17,908	17,600	19,071	17,359	17,071	18,498
Office of the Secretary	85,016	58,472	55,557	77,254	59,901	57,422
Subtotal, Department of the Interior	6,205,487	5,731,974[a]	6,024,618	6,250,341	6,168,229[a]	6,083,001
Department of Education Transfer	104,545	80,597	51,957	66,589	96,876	86,433
Department of Energy Transfer	3,726,837	930,088	1,188,090	4,136,196	717,809	1,094,986
TOTAL, DEPARTMENT OF THE INTERIOR	10,036,869	6,742,659	7,264,665	10,453,126	6,982,914	7,264,420

[a] FY 1982 Budget Authority excludes $71 million for proposed FY 1982 fire suppression supplementals and $30 million in Contract Authority - Land and Water Conservation Fund. Outlays have been adjusted accordingly.

Office of Budget
February 3, 1982

PRESS CONTACTS FOR FURTHER INFORMATION REGARDING INTERIOR'S FY 1983 BUDGET

(Area codes need not be used from Washington, D.C., unless indicated below)

AGENCY	NAMES OF CONTACTS	OFFICE PHONE	HOME PHONE
Office of Budget, Department of the Interior	Joe Gorrell	343-5308	548-4867
	Stan Doremus	343-4965	356-2535
	Austin Burke	343-8077	437-5022
	Waite Waller	343-4211	654-8082
National Park Service	Duncan Morrow	343-6843	321-7128
	George Berklacy	343-6843	250-6503
Bureau of Reclamation	Jess Pepple	343-4268	860-2530
	Paul Hauffe	343-8411	281-3238
Geological Survey	Donovan Kelly	860-7444	(703) 338-4044
	Bette Goodrich	860-7712	860-1431
Fish and Wildlife Service	Adam Sokoloski	343-4328	356-4514
	Inez Connor	343-5634	474-4608
Office of Surface Mining	Roger Cotting	343-4926	(301) 587-3952
	Margaret Mueller	343-4926	(301) 997-1694
Bureau of Indian Affairs	Tom Stangl	343-6342	437-6148
	Carl Shaw	343-6031	546-6107
Bureau of Land Management	Tim Monroe	343-9435	451-5731
	Roger Hildebeidel	343-3516	354-2683
Bureau of Mines	Bob Swenarton	634-1001	946-3491
	Charles Lanman	634-1005	966-2335
Office of Territorial Affairs	Dale Fazio	343-6971	(301) 956-2436
	David Gessner	343-6971	882-7537
Office of the Secretary	Terry Garrett	343-5027	698-7838

DEPARTMENT OF THE INTERIOR

Budget Authority and Outlays

(in thousands of dollars)

Bureaus/Offices	Budget Authority 1981 Actual	Budget Authority 1982 Estimate	Budget Authority 1983 Estimate	Outlays 1981 Actual	Outlays 1982 Estimate	Outlays 1983 Estimate
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Office of Budget
February 3, 1982

COMPARISON OF 1982 and 1983 BUDGET AUTHORITY, OUTLAYS AND OFFSETTING RECEIPTS

(Dollars in Millions)

	1982 [a]	1983	Change
Budget Authority			
Interior Programs [b]			
Gross Budget Authority............	5,813	6,076	+263
Less: Offsetting Receipts........	2,412	2,498	+86
Net Budget Authority.........	3,401	3,578	+177
Energy Programs			
Gross Budget Authority............	930	1,188	+258
Less: Offsetting Receipts........	1,503	1,496	-7
Net Budget Authority.........	-573	-308	-265
Total, Department of the Interior			
Gross Budget Authority............	6,743	7,264	+521
Less: Offsetting Receipts........	3,915	3,994	+79
Net Budget Authority.........	2,828	3,270	+442
Outlays			
Interior Programs [b]			
Gross Outlays.....................	6,265	6,169	-96
Less: Offsetting Receipts	2,412	2,498	+86
Net Outlays..................	3,853	3,671	-182
Energy Programs			
Gross Outlays.....................	718	1,095	+377
Less: Offsetting Receipts........	1,503	1,496	-7
Net Outlays..................	-785	-401	-384
Total, Department of the Interior			
Gross Outlays.....................	6,983	7,264	+281
Less: Offsetting Receipts........	3,915	3,994	+79
Net Outlays..................	3,068	3,270	+202

[a] Excludes $71 million in fire supplementals and $30 million in National Park Service contract authority.

[b] Includes programs proposed for transfer from the Department of Education.

DEPARTMENT OF THE INTERIOR

FY 1982 Supplemental Appropriation Requests
Program Supplementals

(In thousands of dollars)

Bureau and Appropriation	Amount Requested
BUREAU OF LAND MANAGEMENT	
Management of Land and Resources	
Fire suppression	60,000
FISH AND WILDLIFE SERVICE	
Resource Management	
Fire suppression	1,800
NATIONAL PARK SERVICE	
Operation of the National Park System	
Fire suppression	2,200
BUREAU OF MINES	
Mines and Minerals	
Construction of new facility - Bruceton, Pa.	4,073
BUREAU OF INDIAN AFFAIRS	
Operation of Indian Programs	
Fire suppression	7,000
TERRITORIAL AND INTERNATIONAL AFFAIRS	
Administration of Territories	
Northern Marianas inflation adjustment	3,402
Trust Territories of the Pacific Islands	
Bikini resettlement	21,000
Total Supplemental Requests - Department of the Interior	99,475

Office of Budget
January 28, 1982

AUTHORIZING AND TRANSFER LEGISLATION REQUIRED FOR FY 1983

(Dollar Amounts in Thousands)

		Existing Authorization	Expiration Date	Amount Requested in Budget
I.	Continuing Programs:			
	BUREAU OF LAND MANAGEMENT			
	Management of Lands and Resources (except Firefighting)	P.L. 95-352	9/30/82	368,777
	Withdrawal Processing	P.L. 94-579	Until Exp.	248
	Withdrawal Review ($10,000)	P.L. 94-579	Until Exp.	3,500
	Construction, Access and Land Acquisition	P.L. 95-352	9/30/82	2,711
	Payments in Lieu of Taxes 1/	P.L. 95-352	9/30/82	45,000
	BUREAU OF INDIAN AFFAIRS			
	Construction, Ak-Chin Project 1/	P.L. 95-328	None	29,800
	NATIONAL PARK SERVICE			
	John F. Kennedy Center for the Performing Arts	P.L. 97-63	9/30/82	4,211
II.	New Program Authority:			
	GEOLOGICAL SURVEY			
	Digital Cartography Revolving Fund	None	--	3,873
	TERRITORIAL AND INTERNATIONAL AFFAIRS			
	Administration of Territories			
	Guam construction	None	--	3,165
	American Samoa loan guarantee authority	None	--	(8,000) 2/
III.	Proposed Transfers:			
	BUREAU OF INDIAN AFFAIRS			
	Indian Education Assistance	Transfer from DOEd		51,119
	Impact Aid: School Construction Affecting Indian Lands	Transfer from DOEd		838
	ENERGY PROGRAMS			
	Naval Petroleum and Oil Shale Reserves	Transfer from DOE		232,500
	Power Marketing Administrations	Transfer from DOE		711,647
	Strategic Petroleum Reserve	Transfer from DOE		242,118
	Strategic Petroleum Reserve, Off-budget	Transfer from DOE		(2,074,060)

1/ Proposed for later transmittal.
2/ Requirement for loan guarantee authority only, no budget authority requested.

DEPARTMENT OF THE INTERIOR PROGRAM
for the
BUREAU OF LAND MANAGEMENT

Fiscal Year 1983

A total of $1.2 billion is requested for the Bureau of Land Management, including $455 million for Bureau operations, $756 million for mineral and other shared revenue payments for the States, and $45 million for Payments in Lieu of Taxes.

In comparison, the Bureau's activities will generate an estimated $19.8 billion in revenue. Most of these receipts come from three sources -- offshore oil and gas leasing ($18.0 billion); onshore mineral leasing, primarily oil and gas, coal and other energy minerals ($1.3 billion); and, timber sales in western Oregon and elsewhere ($261 million).

The major changes in the proposed budget include:

-- An increase of $163 million in mineral and other revenues shared with the States;

-- A reduction of $50.5 million in Payments in Lieu of Taxes under proposed legislation to be transmitted to Congress later; and

-- An increase of $10.2 million for energy and minerals leasing, reflecting the Administration's commitment to development of onshore and offshore energy resources.

In addition, a supplemental appropriation of $60 million is requested for FY 1982 for emergency firefighting costs.

The President's request for fiscal year 1983 appropriations for the Bureau of Land Management (BLM) emphasizes additional leasing of onshore and offshore energy minerals in support of goals to reduce the Nation's dependence upon foreign oil and gas sources.

A proposed funding increase of $4.2 million for the oil and gas leasing program on the Outer Continental Shelf will allow holding nine sales and increasing the potential number of leases to be issued in FY 1983.

In addition, the President's request includes a $4.1 million increase to accelerate onshore oil and gas leasing activities by BLM, leading to issuance of an estimated 30,000 leases during the year and increased postlease activity to expedite actual development. A current backlog of lease applications will be reduced by one-third under the proposed appropriations. The request also will support onshore oil and gas leasing in areas of Alaska, both inside and outside the National Petroleum Reserve.

In addition, a $925,000 increase is requested to establish a permanent oil shale leasing program and take steps leading to the first tar sands lease sale in FY 1984. A backlog in geothermal lease applications will be eliminated in FY 1983, for which an additional $589,000 is requested. An additional $2.4 million above FY 1982 is requested to meet industry demand for construction materials and for mining law administration.

Energy initiatives undertaken in this Administration have already begun to increase exploration and potential production of new supplies of oil and gas. Millions of acres of public lands administered by BLM have been opened to leasing and exploration activities. These efforts will continue in FY 1983.

Other increases in BLM's FY 1983 budget, compared to FY 1982, include:

--Energy Related Realty Actions will be increased by $1.8 million to provide processing on 350 applications for roads to well sites, and 530 applications for other energy-related rights-of-way.

--Non-energy Realty Actions will be increased by $1.8 million in order to process an additional 730 land use authorizations and land disposal cases, and to process an additional 2,380 Native allotment applications in Alaska.

--An additional $2.1 million in fire management funds will provide for significant improvements to the Automatic Lightning Detection System.

--An overall increase of $1 million will finance additional cadastral surveys in Alaska in order to expedite conveyance of public lands to Natives; and, to survey some 80,000 additional acres in the Lower 48 States related to energy development and land operations.

--An additional $462,000 will be utilized for resource protection activities through cooperative agreements and increased BLM capability to investigate theft of Government resources and unauthorized use of the public lands.

--An additional $2 million is required for General Administration to partially offset increased fixed costs such as office space rental, telephone service, and other such items.

Finally, additional funds are requested for maintenance and engineering services ($1.4 million) to protect the government's capital investment, data management ($1 million) to support field office energy programs, and emergency firefighting ($190,000, exclusive of a $60 million firefighting supplemental) to provide early response to wildfires.

There will be several decreases in BLM programs in FY 1983, compared to the current fiscal year, as summarized below:

--An appropriation of $45 million -- a reduction of $50.5 million from the enacted 1982 level -- will be proposed for Payments in Lieu of Taxes together with proposed legislative changes.

--A reduction of $1.9 million in the coal program will reduce the number of technical investigations, environmental impact statements, and inventories related to coal leasing.

--A reduction of $340,000 in withdrawal review and processing of new withdrawals reflects progress made to eliminate unnecessary land use restrictions in FY 1981 and 1982. The statutory mandate to review existing withdrawals by 1991 will be met.

--A reduction of $2.1 million in forest management will suspend activities in marginal timber producing areas outside of western Oregon and will reduce the levels of inventory, planning and environmental assessment because of completion of major workloads in prior years.

--The overall range management program, consisting of grazing management and wild horse and burro program support, will be reduced $4.4 million, reflecting a reduction in the number of allotment plans to be implemented, acres to be inventoried, and transferring cost of maintenance of range improvements to livestock operators. About 1,900 fewer wild horses and burros will be removed from rangelands in FY 1983, reflecting significant progress in reducing the numbers of excess animals.

--Funding for mineral surveys in wilderness study areas will be reduced by $1.8 million in FY 1983. Mineral surveys will be largely limited to those areas determined potentially suitable for recommendation as wilderness.

--Reductions in soil, water, and air management activities will total $2.2 million, but the Bureau will still meet grazing environmental impact statement schedules and energy leasing goals.

--A reduction of $1 million in the wildlife habitat management program will reduce the number of habitat management plans implemented, the number of acres inventoried and the number of wildlife research projects. Significant wildlife management activities will continue as part of BLM's overall multiple-use role on the public lands.

--A reduction in the recreation program of $126,000 will limit the amount of public land acreage to be inventoried and designated as open, closed or limited to off-road vehicle use. Implementation will be limited.

--Recent efforts to streamline the Bureau's land use planning system will enable a reduction of $1.4 million in this activity. Existing land use plans will be relied upon to a greater extent, along with amendments to existing plans when necessary rather than all-new efforts.

--A decrease of $2.2 million in rangeland improvements in the FY 1983 budget reflects a reduction in grazing fee receipts from FY 1982. (This appropriation is based on 50% of grazing fee receipts in the prior fiscal year.) The 1982 grazing fee is $1.86 per animal unit month (AUM), which reduces the amount of money available for appropriations in the succeeding year for range improvements.

—A decrease of $2.9 million in non-recurring costs for construction and acquisition of lands and easements is also proposed.

RECEIPTS

The Bureau of Land Management is one of the largest sources of non-tax revenue to the U.S. Treasury. Most of the receipts come from offshore and onshore oil and gas leasing activities, sales of Federal resources such as timber, and fees from grazing and other land-use authorizations. BLM estimates FY 1983 receipts collected will total a record $19.8 billion, including $18.0 billion from offshore oil and gas leasing. This is far greater than the overall appropriation to BLM of $1.2 billion. In addition, BLM expects to share a record $756 million in receipts with State, county and local governments.

DEPARTMENT OF THE INTERIOR PROGRAM
for the
BUREAU OF RECLAMATION

Fiscal Year 1983

Summary

The President's fiscal year 1983 budget requests $950 million in new budget authority for the Bureau of Reclamation for planning, development, and operation of projects in the 17 Western States.

The total represents an increase of $179 million over the $771 million appropriated for fiscal year 1982 for Reclamation activities.

The President is requesting a reserve for contingencies in the Budget. This reserve includes an amount for initiation of construction on new Reclamation water resources projects. After consultation with local sponsors, a budget amendment will be proposed for a new construction start that meets the Administration's criteria for non-Federal financing and cost sharing and which is economically and financially sound.

The appropriations request for the new fiscal year beginning October 1, 1982, provides for continuation of construction of projects already underway, including new contract awards necessary to keep key projects on schedule.

The request also includes funds for 13 new plan formulation investigation starts that are considered important in assisting the Western States to meet their water and energy related needs.

CONSTRUCTION PROGRAM: $667 million has been requested for fiscal year 1983 to continue construction on 70 projects, to initiate rehabilitation and betterment work on four projects, and to conduct preconstruction work on two projects. The fiscal year 1982 appropriations provides $549 million for similiar work. Major construction projects for the next fiscal year include:

- BONNEVILLE UNIT (Utah) - $80 million.

  Program will allow further efforts on Stillwater Tunnel, Jordan Aqueduct, Alpine Aqueduct and Upper Stillwater Dam.

- CENTRAL ARIZONA PROJECT (Arizona, California, Nevada, New Mexico) - $161 million.

  Construction will continue on the Granite Reef and Salt-Gila Divisions and the transmission facilities.

- CENTRAL VALLEY PROJECT (California) - $60 million.

  Auburn-Folsom South Unit. Sugar Pine recreation facilities will be completed.

  Sacramento River Division. Construction of the Tehama-Colusa Canal and related distribution systems will be continued.

San Felipe Division. Construction will be completed on the Pacheco and Santa Clara tunnels. Land acquisition and preconstruction activities will continue on several conduits and San Justo Dam and Reservoir.

San Luis Unit. A programmable monitoring system at O'Neill Pumping Plant will be installed. Raising the San Luis Canal lining that has subsided will be continued.

Miscellaneous Project Programs. Rehabilitation of the Friant-Kern canal will be completed. Work on the Delta-Mendota canal will continue.

- CHIEF JOSEPH DAM PROJECT, OROVILLE-TONASKET UNIT (Washington) - $17 million.

  Construction of the Cordell and Crater Lakes Pump Distribution Systems and land and rights acquisition will be completed.

- COLORADO RIVER BASIN SALINITY CONTROL PROJECTS (Arizona, California, Colorado) - $61 million.

  Construction work will continue on the Yuma-Desalting Plant and related facilities and on the Grand Valley, Paradox Valley Units, and Las Vegas Wash Units.

- COLUMBIA BASIN PROJECT (Washington) - $50 million.

  As part of the Irrigation Facilities, program work on essential drainage and supplemental construction continues and Block 26 lateral work will be initiated. At the Third Powerplant, modification work on the powerplant continues.

- DALLAS CREEK PROJECT (Colorado) - $39 million

  Construction on Ridgeway Dam will continue and a contract will be awarded for reservoir clearing.

- DOLORES PROJECT (Colorado) - $46 million.

  The McPhee Dam and Dolores Tunnel and Canal construction will be continued.

- FRYINGPAN-ARKANSAS PROJECT (Colorado) - $13 million.

  Construction will be completed on the Fountain Valley Conduit. Work will continue on Unit 2 of the Mt. Elbert Powerplant.

- MCGEE CREEK PROJECT (Oklahoma) - $53 million.

  Acquisition of land and rights for fish and wildlife mitigation facilities will be completed. Construction of the dam and clearing of the reservoir will be continued.

- NORTH LOUP DIVISION (Nebraska) - $39 million.

Calamus Dam and Mirdan Canal construction will continue.

Funds are requested for Rehabilitation and Betterment work, $27 million; Safety of Dams work, $26 million; Drainage and Minor Construction activities, $16 million and development of Recreation and Fish and Wildlife facilities, $14 million.

LOAN PROGRAM: The fiscal year 1983 budget request is $40 million compared to a fiscal year 1982 appropriation of $23 million. Under the Small Reclamation Projects Act work will continue on 9 projects and under the Distribution System Loans Act, work will continue on one project.

GENERAL INVESTIGATIONS: $37 million is requested for investigation and research activities for fiscal year 1983 compared to the $31 million appropriated for fiscal year 1982. Funds will be provided for 58 investigations including 13 new studies throughout the 17 Western States with emphasis on energy production, municipal and industrial water supplies, and Indian water resource development. The 13 new studies are as follows:

1. Colorado Big-Thompson Hydroelectric Study, Colorado
2. Columbus Bend Water Supply, Texas
3. Crow Creek Indian Reservation, South Dakota
4. CRSP-Crystal Dam Powerplant, Colorado
5. Deep-Carbonate Aquifer Investigation, Nevada
6. Lake Meredith Salinity Control Project, New Mexico-Texas
7. Lower Colorado Water Supply Study, California
8. Minidoka Project, North Side Pumping Division Extension, Idaho
9. Prairie Bend Unit, Nebraska
10. Rapid City Water Supply, South Dakota
11. Shoshone Valley M&I Water Supply Study, Wyoming
12. Solar/Hydro Integration Project, Arizona, Nevada
13. Wasatch Front Total Water Management, Utah

Advance Planning work, formerly funded from the Construction Program, will be made a part of the General Investigations Program in 1983. This change will considerably shorten the time needed to prepare a project for construction. Eleven new advance planning studies are proposed for 1983. They are:

1. Anderson Ranch Powerplant, Boise Project - Idaho
2. Buffalo Bill Dam Modification, Shoshone Project - Wyoming
3. Buffalo Bill Dam Powerplant, Shoshone Project - Wyoming
4. Minidoka Powerplant, Minidoka Project - Idaho
5. Palisades Dam Powerplant, Palisades Project - Idaho
6. Yellowtail Afterbay Dam Powerplant - Montana
7. Lower Gunnison Basin Unit, Colorado River Water Quality Improvement Program - Colorado
8. McElmo Creek Unit, Colorado River Water Quality Improvement Program - Colorado
9. Palo Verde Irrigation District Unit, Colorado River Water Quality Improvement Program - California
10. Saline Water Use and Disposal Opportunities Unit, Colorado River Water Quality Improvement Program - Arizona, California, Colorado, Nevada, New Mexico, Utah, Wyoming
11. Unita Basin Unit, Colorado River Water Quality Improvement Program - Utah

OPERATION AND MAINTENANCE: For fiscal year 1983, $141 million is requested for operation and maintenance activities on 32 projects. The fiscal year 1982 appropriation is $119 million.

OTHER ACTIVITIES: The fiscal year 1983 budget request includes $49 million for General Administrative Expenses, compared to the $40 million appropriated for fiscal year 1982. $1.0 million is requested for the Emergency Fund in 1983. No funds were requested in 1982. $2.7 million is provided in Permanent Appropriations for fiscal year 1983, the same as in fiscal year 1982.

DEPARTMENT OF THE INTERIOR PROGRAM
FOR THE
FISH AND WILDLIFE SERVICE

Fiscal Year 1983

The budget authority requested for the Fish and Wildlife Service in FY 1983 is $416,103,000. This includes $179,159,000 for permanent appropriations, $3,750,000 for trust funds, and $233,194,000 for appropriations requiring Congressional action. The Congressional appropriation request represents a net decrease of $19,090,000 over comparable levels proposed for FY 1982. The net change is distributed by account as follows: Resource Management, a decrease of $3,228,000; Construction, an increase of $6,022,000; Land Acquisition, a decrease of $14,924,000; Migratory Bird Conservation Account, a decrease of $1,200,000; and Payments in Lieu of Taxes, a decrease of $5,760,000.

Resource Management

The major increases in the Resource Management appropriation are as follows:

- Continue a program of minor rehabilitation and increased cyclical maintenance at National Wildlife Refuges and research facilities to maintain facilities and equipment, protect the land base, and to insure effective habitat management. (+8,768,000).
- Enhance fishery resources at the fifty-eight remaining Service hatcheries through increased cyclical maintenance support. (+1,361,000).
- Increase the National Wetlands Inventory mapping capabilities and accelerate the completion date for mapping of high priority wetlands areas. (+1,141,000).
- Strengthen public use programs on refuges and hatcheries through restoration of visitor facilities and expansion of interpretation and informational activities. (+1,429,000).

Significant Decreases:

- Limit Service participation to the most essential activities in support of Federal, State, and private coal leasing activities; eliminate operational support to other Departmental on shore energy and minerals programs due to increased efforts in the Bureau of Land Management; and decrease involvement in low priority permit licensing reviews. (-2,340,000).
- Streamline the distribution of technical biological information produced by the Service. (-600,000).
- Discontinue the cooperative fish and wildlife research units. (-4,444,000).

- Reduce research capabilities on the impact of disease on wildlife resources resulting in the closure of the National Wildlife Health Laboratory at Madison, Wisconsin; decrease contaminant research work; eliminate Service support to States for research on migratory shore and upland game birds. (-2,286,000).
- Transfer to States or close thirty-one fish hatcheries, not including those that primarily produce fish for anadromous fisheries and the Great Lakes, Indian reservation, Federal mitigation, and endangered species restoration. (-3,676,000).
- Terminate the fisheries National Reservoir research program, and limit research activities on fish nutrition and diet development. (-1,153,000).
- Discontinue fishery assistance provided to Washington State Department of Game in carrying out fishery assessment activities related to the Judge Boldt decision (-288,000). Eliminate cooperative fishery assistance with the National Park Service and reduce assistance to the Bureau of Indian Affairs. This will result in the closure of twelve field stations (-567,000).
- Decrease area surveillance activities involved in the protection of endangered species, and limit recovery efforts for the peregrine falcon. (-1,013,000).

Overall, the Resource Management appropriation will provide for:

	($ in thousands)		
Activity	1982	1983	Change
Habitat Preservation	37,683	31,147	-6,536
Wildlife Resources	99,014	107,466	+8,452
Fishery Resources	36,521	32,852	-3,669
Endangered Species	17,563	16,550	-1,013
General Administration	29,569	30,907	+1,338
Totals	220,350	218,922	-1,428

Construction

The Construction appropriation request includes $12,705,000 to restore and rehabilitate facilities of the National Wildlife Refuge System and the National Fish Hatchery System as one important means of protecting fish and wildlife resources and increasing opportunities for all Americans to share the benefits and values that these resources provide.

Construction will involve water control and delivery systems, roads, and fences at thirty-eight national wildlife refuges (+6,607,000); pollution abatement facilities and rehabilitation of current fish production capability at eight fish hatchery stations (+3,838,000); development and rehabilitation of water supply and effluent treatment systems of three research laboratories--Great Lakes Fishery Laboratory, Hammond Bay Biological Station, and Patuxent Wildlife Research Center (+1,624,000); and dam safety inspections for the remaining dams associated with Service facilities to ensure the protection of life, property, and fish and wildlife habitat (+636,000).

Land Acquisition

The FY 1983 budget includes $1,567,000 for the acquisition of critical habitat for the endangered Kirtland's Warbler and the American Crocodile. This amount will be used to acquire approximately 600 acres.

Migratory Bird Conservation Account

Estimated receipts of $16,376,000 from the sale of Migratory Bird Hunting and Conservation Stamps will allow for the preservation of 30,300 acres of essential migratory waterfowl habitat in FY 1983. No advance is requested from the Wetlands Loan Fund.

National Wildlife Refuge Fund

No direct appropriation is requested for FY 1983. Although this represents a decrease from FY 1982 in payments to counties of $7,784,000 direct appropriations, the Administration is proposing new authorization legislation which will make the payment formula more equitable for Federal lands administered by the Fish and Wildlife Service, as well as the Bureau of Land Management, Forest Service, and the National Park Service. Payments to counties containing Service lands will be available from refuge receipts from sale of timber, grazing privileges, oil, gas, minerals, and fees of $4,053,000 of which $1,953,000 will be needed for expenses incurred in support of these sales.

FY 1982 Supplemental Appropriations Request

The Service must provide the National Wildlife Refuge System fire management program with the necessary resources to prevent the loss of any human life as a result of wildfires on refuges and provide sufficient initial forces to contain and limit all wildfires. The Fish and Wildlife Service will require additional appropriations of $1,800,000 for FY 1982. This increase funding will provide for purchase and replacement of worn tractors, pumper trucks, chain saws and mobile radio equipment ($750,000). In addition, fire management training ($200,000) and increased operational support ($850,000) will be available.

DEPARTMENT OF THE INTERIOR PROGRAM
for the
NATIONAL PARK SERVICE

Fiscal Year 1983

The budget authority requested for the National Park Service in fiscal 1983 is $736.3 million, a decrease of $49.2 million from the amount requested for fiscal 1982. In fiscal 1982, Secretary Watt proposed a major new funding initiative to restore and improve the aging physical plant of the National Park System. The fiscal 1983 request includes $105 million in the operating and construction accounts to continue this important effort. Overall, the 1983 budget provides an increase of $24.6 million for park operations and $38.5 million for construction. Offsetting these increases are reductions of $43.7 million for the acquisition of additional park lands; $5.4 million for national recreation and preservation programs; $7.7 million for urban park and recreation grants; and $25.4 million for historic preservation grants to individual States and the National Trust for Historic Preservation. Federal support for the John F. Kennedy Center for the Performing Arts decreases by $0.2 million. In addition, the fiscal 1983 request eliminates remaining contract authority for land acquistion which is no longer required for program purposes, resulting in a decrease of $30.0 million in budget authority. An explanation of the National Park Service's request by appropriation is provided below:

Operation of the National Park System

Budget authority requested under this appropriation for fiscal 1983 totals $539.7 million, an increase of $24.6 million over the fiscal 1982 request of $515.1 million. This increase will be used primarily to restore programs which have been curtailed due to inflationary pressures on park operating budgets. Major components of the increase include:

— $15.2 million for maintenance programs to upgrade routine maintenance activities; to cover cost increases in supplies, materials, and contractual services; and to fund selected maintenance projects deferred in fiscal 1982 due to budget reductions.

— $6.3 million to improve interpretive and informational programs and to augment visitor protection and law enforcement activities.

— $0.3 million to enhance concessions management programs in order to provide more timely and effective review and evaluation of concession operations in park areas.

— $4.5 million to conduct important research, monitoring and management programs for the protection and preservation of park natural and cultural resources, including $0.6 million to expand the Service's research activities on the affects of acid rain as part of a coordinated Governmentwide effort.

These increases will be offset in part by redirecting funds used in fiscal 1982 for non-recurring requirements.

National Recreation and Preservation

The Service is requesting $7.0 million for the "National Recreation and Preservation" appropriation in fiscal 1983, a decrease of $5.4 from the fiscal 1982 appropriation. This decrease results in part from reductions in budgeted administrative costs for State grants awarded in previous fiscal years from the Historic Preservation Fund, Urban Park and Recreation Fund, and the Land and Water Conservation Fund. Beginning in fiscal 1983, these costs will be paid from unobligated prior year funds. The new area designation program relating to the National Wild and Scenic Rivers and National Historic and Scenic Trails Systems is being eliminated. The Service will continue, however, to complete studies of those rivers and trail routes specifically designated by Congress. In addition, general administrative costs, included in the fiscal 1982 appropriation, are transferred to the General Administrative Expenses activity under the "Operation of the National Park System" appropriation for fiscal 1983. These decreases are partially offset by an increase of $0.7 million for tax certification reviews. This increase will help meet the additional workload resulting from the Administration's enhancement of tax incentives for historic preservation and the elimination of Federal support for State historic preservation staffs.

Urban Park and Recreation Fund

The fiscal 1983 budget request eliminates funding for Urban Park and Recreation Fund grants to local governments, a decrease of $7.6 million from the level approved for fiscal 1982. Congress added these funds to the Service's fiscal 1982 budget request to supplement existing "innovation grants" for recreation programs and facilities. Since the purpose of these grants is to produce local recreation benefits, the Administration believes they are not an appropriate use of Federal tax dollars.

Historic Preservation Fund

No budgeted authority is requested for Historic Preservation Fund grants in fiscal 1983, a decrease of $25.4 million from the fiscal 1982 appropriation. This proposal limits direct Federal support for the preservation of historic properties to those which are part of the National Park System. Matching grants to States and to the National Trust for Historic Preservation will be eliminated. The Administration has taken steps to encourage private sector involvement in the preservation of historic properties through the enhancement of economic and tax incentives.

Construction

For fiscal 1983, the Service is requesting $123.7 million for construction, an increase of $38.5 million over the fiscal 1982 appropriation. As part of Secretary Watt's park restoration and improvement initiative, the National Park Service is proposing an accelerated construction program to correct major deficiencies in park facilities and serious resource preservation problems. The budget request includes 46 projects in 40 parks. It provides for the rehabilitation of water and sewer systems, fire and safety improvements in public buildings, reconstruction of unsafe roads and bridges, pollution and erosion control, and the preservation of historic structures.

Land Acquisition

The land acquisition program proposed for fiscal 1983 is $59.8 million, $43.7 million less than the amount appropriated for fiscal 1982. The requested amount provides funds to pay court awards relating to land acquisitions in nine recently authorized areas, emergency and hardship acquisitions in inholdings, general deficiency awards and relocation expenses, and administrative costs.

John F. Kennedy Center for the Performing Arts

Budget authority of $4.0 million is requested for the John F. Kennedy Center for the Performing Arts, a decrease of $0.2 million from the fiscal 1982 appropriation. The National Park Service currently shares the cost of building maintenance, housekeeping, and administration with the Center Board of Trustees. The reduced level of Federal support requested for fiscal 1983 assumes that the cost sharing formula will be renegotiated, following recommendations by the General Accounting Office, to reduce the portion paid by the National Park Service

Fiscal 1982 Request for Supplemental Appropriations

A supplemental appropriation request for $2.2 million for fiscal 1982 to cover additional requirements for forest fire suppression will be submitted with the fiscal 1983 budget request.

DEPARTMENT OF THE INTERIOR PROGRAM
FOR THE
U.S. GEOLOGICAL SURVEY

Fiscal Year 1983

The FY 1983 budget request for the U.S. Geological Survey, submitted to Congress by Secretary of the Interior James Watt, totaled $517.8 million, an increase of $21.1 million from the FY 1982 budget of $496.7 million.

Of the total budget request, $379 million will support the basic USGS program of earth science and natural hazards investigations, energy- and mineral-resource inventory, water resources investigations, and topographic mapping.

About $128.5 million of the USGS budget is earmarked for supervision of mineral leases and royalty collection on federal and Indian lands. The management of this activity has been transferred from the former USGS Conservation Division to the new Minerals Management Service, which reports directly to the Under Secretary of the Interior. The move is designed to strengthen the Department's ability to conduct its royalty management responsibilities and to help eliminate any undercollections in the program that produced over $4 billion in revenue in 1981.

A breakdown of the major USGS activities and programs of the FY 1983 budget, excluding the funding for the new Minerals Management Service, includes:

* $152.8 million requested for basic geologic research and investigations.

* $112 million requested to continue the national program of water resources investigations.

* $70.5 million requested to support the National Mapping Program.

* $11.5 million requested to continue the programs of the Office of Earth Sciences Applications.

Special program elements in the USGS FY 1983 budget request include $6.4 million for operation, exploration, and development of the Barrow, Alaska, area gas fields and $3.8 million for the digital cartography program. The balance of the total USGS budget request will be used for personnel services, general administration and facilities support.

Highlights of the FY 1983 funds requested for the basic USGS program of "Surveys, Investigations, and Research" include:

* GEOLOGIC RESEARCH: Continued basic research and investigations of the geologic processes that have formed and continue to modify the country, its coastal areas, and its deep ocean margins will be covered by $152.8 million requested for FY 1983. Based upon this research and information, the USGS is able to provide accurate, up-to-date evaluations of the nation's mineral, energy and other resources and to identify constraints placed on the nation by geologic hazards. The FY 1983 budget reflects increases totaling $5.3 million divided among several programs, including:

* The Conterminous United States Minerals Appraisal Program (CUSMAP), which will provide for a systematic mineral resource appraisal of mineralized areas of the United States. The increased funding will allow a start early in FY 1983 in an area of high mineral potential;

* An accelerated program of applied and basic geologic research to assist the nation in the development of new deposits of strategic and critical minerals;

These increases will be offset by decreases resulting from reductions in other program areas, including the uranium and thorium, geothermal and oil shale programs and earthquake prediction activities and volcano monitoring in the Cascades and Alaska, and by elimination of the world energy assessment program.

* CONSERVATION OF LANDS AND MINERALS: A total of $128.5 million was requested to support programs for the conservation of lands and minerals, including the newly formed Minerals Management Service. Such programs include:

* The determination of the economic resource value of energy mineral tracts to be leased as a basis for accepting or rejecting bids that are submitted; and the regulation and supervision of oil and gas exploration, development, and production on federal leases to ensure protection of the environment and safety of operations. Increased funding will provide for reserve estimates of new fields on the OCS to update the computerized storage and retrieval system.

* An increase for the onshore oil and gas lease regulation program to address the need for additional inspections to protect the government's interest in production of oil and gas from leases on federal and Indian lands. The increase in this program will be offset by a decrease in the coal program, which will place more reliance on data obtained through industry exploration licenses.

* An increase in the improved royalty management system will provide funds necessary for the second phase of the program that will automate comparisons of production data with sales volumes. Discrepancies will be noted automatically by the system and will either provide for resolution of the error or the detailed audit of payor records.

* WATER RESOURCES INVESTIGATIONS: $112 million, an increase of over $5 million, is being requested to continue the national program of water resources investigations. This program supports the collection of the largest data base for information on the quantity and quality of surface and ground water in the nation and assures that the water data needed to develop and manage these water resources are available. Increases in funds will provide for:

* Expansion of the ongoing acid rain program to study the effects of acid rain on the lakes, rivers and ground water.

* Expansion of the Survey's toxic waste program to develop information and techniques for mitigating ground-water contamination; and technical support to federal and state officials faced with making decisions about the control of underground disposal of toxic wastes.

* Improvement of the hydrologic data network with new data collection stations in strategic locations and intensified analysis and evaluation of surface and ground water data.

* Conducting high priority water-quality studies, including river quality assessments, as part of the federal-state cooperative program.

Increases in the water resources investigations program will be partially offset by a decrease in the coal hydrology program.

* NATIONAL MAPPING PROGRAM: A total of $70.5 million is being requested to support the National Mapping Program. The USGS is the nation's principal civilian mapmaking agency and coordinates national mapping requirements throughout the federal government for the Department. Program activities for FY 1983 include:

* Preparing new standard 7.5-minute topographic maps and revising more of the existing 7.5-minute topographic maps of the United States. Special mapping efforts are being made in such high national interest areas as public lands, energy areas including coal and hydrocarbons, and coastal zone areas.

* Orthophotoquads and orthophoto products of Alaska will be produced in response to the Alaska National Interest Lands Conservation Act.

* The National Cartographic Information Center will continue to acquire, index, and catalog information on cartographic and geographic data available from federal, state and private organizations and to serve as a focal point to the user public for their requests for information about the data. Efforts are being made to improve access to cartographic and geographic data held in non-federal institutions and to make this information available on a national basis through direct computer linkage at USGS field offices.

* EARTH SCIENCE APPLICATIONS: A total of $11.5 million was requested to support such applications programs as:

* Land Resources Data Applications -- to conduct and sponsor activities that improve technical communications between the collectors and users of natural resource information.

* Environmental Affairs activities -- to coordinate environmental matters within the USGS and ensure overall bureau compliance with the National Environmental Policy Act and other environmental laws.

* Earth Resources Observations Systems (EROS) program -- to provide remotely-sensed imagery and data for analysis of resource and environmental issues, provide training in the use of this data, and provide departmental leadership in developing and using space-related technology.

Highlights of USGS special program increases in the FY 1983 budget include:

* BARROW, ALASKA, GAS FIELD: The $6.4 million requested for the Barrow area gas program will ensure that natural gas will continue to be supplied to the village of Barrow and other communities and federal installations near Point Barrow, Alaska.

* DIGITAL CARTOGRAPHY: The $3.8 million in proposed funding for the digital cartography program will enable the USGS to produce and make available digital cartographic data from existing map series for computer-based analyses by a variety of users. The data would be standardized to be used for multiple purposes, and a distribution system would be developed to make the digitized data readily available to users. Legislation is currently pending to establish a revolving fund to finance through receipts the expanding digital cartographic data program, which is currently financed by direct congressional appropriation.

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DEPARTMENT OF THE INTERIOR
for the
BUREAU OF MINES

Fiscal Year 1983

Budget authority proposed for the Bureau of Mines for fiscal year 1983 is $125,476,000. This amount includes an appropriation request of $124,676,000 for Mines and Minerals and $800,000 for trust funds.

The budget level provides $37,823,000 for Minerals Health and Safety Technology, $6,235,000 for Minerals Environmental Technology, $33,888,000 for Mineral Resources Technology, $20,408,000 for Data Collection and Analysis, $5,427,000 for Land Assessments, and $20,895,000 for General Administration.

The total request for Mines and Minerals represents a net decrease of $25,926,000 below the amount requested in fiscal year 1982. Of the proposed decrease, $12,273,000 results primarily from the limiting of research and development projects to those that offer potential benefits in the long term, and the completion of required mineral assessment work. The remaining $13,653,000 of the decrease represents a decision not to request funding of the Mineral Institutes and the "Construction and Rehabilitation" programs in fiscal year 1983. Fiscal year 1983 funding is not proposed for the Mineral Institutes, which were transferred from the Office of Surface Mining to the Bureau of Mines in January 1982, because other sources of public and private support are expected to be available to the Mineral Institutes to help meet their program objectives. No additional funding is needed or authorized for "Construction and Rehabilitation" in fiscal year 1983, because the fiscal year 1982 request for this program is adequate to meet the cost of design and construction of the Bruceton, Pennsylvania, facility that replaces the Pittsburgh building planned to be sold to Carnegie-Mellon University.

An estimated $800,000 will be available to the Bureau in fiscal year 1983 in the form of trust funds deposited by States, local governments, and private organizations with which the Bureau will conduct cooperative projects.

Minerals Health and Safety Technology

The budget proposes $37,823,000 for Minerals Health and Safety Technology to continue research on a broad range of safety and engineering-related health problems in coal, metal, and nonmetal mines. This area of research gives priority to lowering the probability of mine accidents and occupational illnesses among miners. The proposed decrease of $8,19[illegible],000 reflects a policy decision to limit federally-funded research and development to high-risk projects with long-term payoff.

Minerals Environmental Technology

The fiscal year 1983 request of $6,235,000 for Minerals Environmental Technology will allow continued research on reducing the adverse environmental effects associated with mining and mineral processing activities, and will provide funding necessary to accommodate higher priority needs. The proposed decrease of $4,183,000 will reduce research on controlling mine waste material, and will eliminate some areas of mined land reclamation research.

Mineral Resources Technology

The budget proposes $33,888,000 for Mineral Resources Technology in fiscal year 1983. Research efforts will continue on technology designed to help ensure the availability of an adequate and dependable domestic supply of minerals and mineral-based materials. The increase of $2,627,000 will be directed primarily toward developing mineral extraction techniques and processing technologies that will recover and conserve strategic and critical materials, including chromium, nickel, tungsten, and cobalt.

Data Collection and Analysis

The budget request of $20,408,000 for Data Collection and Analysis provides for the collection, verification, and dissemination of technical and economic data on foreign and domestic non-fuel mineral supply and demand. This information is needed for policy development, and public and private decision-making. The increase of $811,000 involves no change in program funding from current levels, but is to offset, in part, the cost of mandatory items, such as rental payments and payroll costs.

Land Assessments

The budget proposes $5,427,000 to continue programs for assessing the mineral potential of Federal lands. These evaluations will guide Federal decisions concerning the potential withdrawal of lands under consideration as wilderness areas. The decrease of $3,985,000 for this program is the result of the completion of required wilderness surveys.

General Administration

The budget proposeses $20,895,000 for the General Administration program, which finances executive guidance and administrative services for the Bureau. The net increase of $648,000 is for mandatory cost items, such as increased telephone and postage costs.

DEPARTMENT OF THE INTERIOR PROGRAM
FOR THE
OFFICE OF SURFACE MINING

FISCAL YEAR 1983

SURFACE MINING REGULATORY PROGRAMS: The Office of Surface Mining is requesting a total of $62.2 million for its regulatory program, an increase of $3.7 million. OSM is committed to attaining approved State regulatory programs in all coal producing States. Seventeen of the 27 coal States had obtained primacy by December 31, 1981, seven additional States are expected to gain approval by mid-1982, and approval for two additional States is expected in Fiscal Year 1983, leaving Georgia as the only State with current production and a direct Federal Program.

MINE RECLAMATION PROGRAMS: The 1983 budget requests $97.6 million to reclaim abandoned land mines, a decrease of $4.4 million. Of this amount, $78.5 million is earmarked for non-matching grants to States and $19.1 million is budgeted for Federal programs including Fee Compliance, fund management and technical services, ($6.0 million), Federal emergency projects ($9.4 Million), and the Rural Abandoned Mine Program ($3.7 million). Funding for all abandoned mine reclamation programs is derived from a special fee which is assessed on each ton of coal produced. Revenues from this fee in Fiscal Years 1982 and 1983 are estimated at 211 and 217 million dollars, respectively.

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

Budget authority for the Office of Surface Mining (OSM) in Fiscal Year 1983 is $159.8 million compared with $160.6 million for the preceding fiscal year. The proposed budget includes $112 million for grants to the States to assist them in carrying out their lead role in both regulation and reclamation, an increase of $28.3 million over Fiscal Year 1982. A decreasing Federal role is reflected in reductions of $29.1 million in direct Federal Regulatory and Reclamation programs between the same fiscal years. A total of $47.9 million is budgeted for Federal regulatory and reclamation activities and technical assistance to the States.

OSM is committed to attaining approved regulatory programs in all coal producing States. Seventeen of the 27 coal producing States have attained primacy, seven others are expected to do so by mid-1982, and 2 additional primacy States are anticipated by Fiscal Year 1983, leaving only Georgia with a Federal Program for active mining. As State programs are implemented an estimated 15,400 coal mines and related facilities over the United States will be subject to regulation by the various States. Federal regulatory program operations and inspection activities will decrease by $11.3 million in FY 1983 but technical assistance efforts will increase by $4.8 million. A decrease of $2.8 million is projected in executive management and general administrative expenses. These decreases are made possible by the States assuming regulatory primacy and by completion of a major agency reorganization in Fiscal Year 1982. The reorganization has increased the operational efficiency of the office by combining Headquarters functions and by replacing the previous regional offices with State liaison offices.

Proposed funding for OSM's Abandoned Mine Land Reclamation Programs totals $97.6 million, a decrease of $4.4 million from the preceding fiscal year. Funding for abandoned mine land programs comes from special fund receipts generated by a fee on coal production. Each State with approved State regulatory and reclamation programs is entitled to 50% of revenues generated within its boundaries.

In Fiscal Year 1983, $78.5 million is earmarked for non-matching reclamation program grants to States, an increase of $19.4 million; and $19.1 million is requested for Federal programs and support, a decrease of $23.8 million. The Federal fee compliance and fund management program is budgeted at $4.9 million and is expected to collect and manage an anticipated 217 million dollars in revenues.

The Interior reclamation project program, which is geared to address projects of imminent danger to life and property, will be reduced by $18.7 million to $9.4 million. The Federal program is expected to address emergency projects only with the expectation that the States will begin to assume a larger role in abandoned mine reclamation utilizing funds provided through grants. Technical support to both Federal and State reclamation efforts will continue to be budgeted at $1.2 million dollars. The Soil Conservation Service's Rural Abandoned Mine Program for assistance to affected land owners is budgeted at $3.7 million to continue cooperative projects initiated in prior years.

DEPARTMENT OF THE INTERIOR

for the

BUREAU OF INDIAN AFFAIRS

Fiscal Year 1983

The proposed budget for the Bureau of Indian Affairs for fiscal year 1983 totals $1,651,992,000 in Budget Authority. This amount is made up of $1,050,792,000 in Federal appropriations and $601,200,000 in permanent and trust funds. This budget is designed to reflect the Bureau's emphasis on three major areas of responsibility. They are: (a) to recognize and preserve the rights of tribal self-government and strengthen tribal capacity to govern, and provide resources for tribal government programs; (b) to emphasize management improvement activities that will strengthen BIA's ability to serve Indian people; and (c) to fulfill and execute the Federal Government's trust responsibility to American Indian tribes. The budget request includes $256.7 million for Indian Education; $122.0 million for Social Services and Housing; $36.0 million for Law Enforcement on reservations; $26.3 million for Tribal Government Services; $3.9 million for Navajo-Hopi Settlement Program; $56.9 million for Indian Self-Determination Services to aid tribal organizations under the provisions of Public Law 93-638, the Indian Self-Determination and Education Assistance Act (including $5.0 million for a new initiative to aid small tribes); $66.6 million for Economic Development and Employment programs (including $10.0 million for a new economic development initiative); and $87.2 million for Natural Resources Development. Protection of Indian trust resources, tribal rights, Real Estate and Financial Trust Services are proposed at $47.2 million; General Administration at $69.1 million; Facilities Management at $93.4; a General Overhead Cost Reduction of -$16.0 million; Construction at $106.0 million; Road Construction at $43.6 million; and Indian Education program transfers from the Department of Education of $51.9 million.

The FY 1983 budget request for appropriated Federal funds reflects an increase of $20.2 million in budget authority over the amount appropriated or requested for FY 1982. The request consists of an increase of $40.0 million for operating programs (including $10.7 million for a portion of the FY 1983 cost of Federal employee pay raises which were effective October, 1981); an increase of $12.4 million in construction; a decrease of $3.6 million in road construction; and a net decrease of $28.6 million for the programs proposed for transfer from the Department of Education. The President's Budget for FY 1983 includes a proposed FY 1982 supplemental of $7.0 million for fire suppression.

Indian Education

In FY 1983, $256.7 million is requested for Indian Education under the Operation of Indian Programs appropriation. This consists of $179.8 million for School Operations; $26.0 million for Johnson O'Malley programs for students in public schools; and $50.9 million in Continuing Education, including scholarship grants ($30.1), Adult Education ($4.0), Tribally Controlled Community Colleges ($10.4), and Post-Secondary Schools ($6.4). A separate appropriation for programs formerly financed under the Department of Education is described under a later heading of Indian Education Assistance.

The Bureau of Indian Affairs provides funds for a Federally supported school system presently comprised of 210 schools and 14 dormitories for Indian students where public schools are not available or cannot meet the special needs of Indian children. The decrease in number of students served (from 41,000 in 1982 to 39,000 in 1983 is due to closures scheduled at the end of FY 1982 (Concho, Oklahoma; and Wahpeton, N. Dak.) and the proposed transfer of day schools to the State of Alaska. These transfers will be negotiated with the State and are consistent with the State's Constitution to establish a single school system in Alaska. Intermountain (Utah) and Mt. Edgecumbe (Alaska) off-reservation boarding schools are also scheduled for closure at the end of the 1982-83 school year. The Intermountain closure is due to the excess capacity in Bureau boarding schools. The Mt. Edgecumbe closure also supports the continuing effort to establish a single school system in Alaska.

The majority of the schools in the system are operated by the Bureau; however, an increasing number are controlled, operated and managed by Indian groups under contractual arrangements with the Bureau. When necessary, residential programs are provided in conjunction with instructional programs, either Federal, tribal, or public. Also included in the school system are two post-secondary institutions serving approximately 1,150 students. The third post-secondary school, Southwestern Indian Polytechnic Institute (N. Mex.) will be closed by the end of FY 1982.

The $26.0 million for the Johnson O'Malley program will provide services to 181,000 students in 26 states with over 900 local Indian education parent committees helping to determine needs.

During FY 1983, scholarship grants will be provided to Indian men and women post-secondary students totalling approximately 17,000 Full-Time Equivalents. Higher education financial assistance from the Bureau of Indian Affairs will assist in meeting the otherwise unmet financial needs of Indian students attending college. An additional 2,600 students are enrolled in Indian Controlled Community Colleges also supported by the Bureau. The Bureau's Adult Education programs serve 16,500 Indians.

Indian Services

A proposed FY 1983 program of $98.7 million in Social Services programs includes requirements related to the Child Welfare Act ($7.7 million). The program includes an estimate of $80.3 million for welfare grants to individuals.

The $23.3 million Housing Program for FY 1983 will continue the long-range objective of the Bureau to eliminate substandard housing on Indian reservations. Through the Housing Improvement Program approximately 690 new homes will be built and 3,900 homes will be renovated and/or enlarged.

The $56.9 million FY 1983 Self-Determination Services program includes $30.3 million to cover tribal overhead costs associated with P.L. 93-638 contracts, $19.4 million for grants to tribal governments, and a new $5.0 million initiative for small tribes to acquire and maintain needed core-management capability.

Tribal governments will also benefit in FY 1983 from funding for government functions such as law enforcement, courts and general government operations. The budget includes $36.0 million for Law Enforcement and $26.3 million for Aid to Tribal Governments including Tribal Courts.

The FY 1983 Navajo-Hopi Settlement program of $3.9 million represents the planned phaseout of the range restoration and stock reduction programs with the continuation of a program to maintain the restored grazing capacity of the former Joint Use area.

Economic Development and Employment Programs

The FY 1983 request of $66.6 million for Economic Development and Employment Programs includes approximately $28.4 million for Direct Employment and Vocational Training. Also included is $10.0 million for an economic development initiative which provides grants to Indian tribes for the purposes of 1) initiating business development of natural resources, 2) encouraging private sector investment, and 3) promoting sound business principles.

Credit and Financing technical staff resources which operate the Bureau's various loan programs are funded at $6.0 million. The request also includes $22.1 million for Road Maintenance on Indian reservations.

Natural Resources Development

The request of $87.2 million for Natural Resources Development in FY 1983 supports programs in Energy and Minerals, Forestry, Agriculture, Range, Irrigation and Power Project Operation and Maintenance, Water Resources, Wildlife, Parks and Fisheries Management, and other multi-disciplinary natural resource efforts.

Forestry includes wildfire suppression on forest and range lands. Efforts are continued to provide funds for the operation and maintenance of Indian irrigation systems to insure the continued delivery of water to meet contractual and legal obligations and to prevent deterioration of the irrigation systems.

Trust Responsibilities

Strengthening of the Trust Responsibilities role continues to be a goal of the Bureau. The FY 1983 request of $47.2 million is for programs to carry out the Federal trust responsibility including Real Estate and Financial Trust Services, Rights Protection, and Environmental Quality Services. Of this amount, $3.2 million is requested to provide funds for implementation of the Alaska National Interest Lands Conservation Act.

This budget request will continue litigation efforts, real estate services and appraisals, boundary surveys, land records improvement, lease compliance efforts, cultural resources activities (archeological clearances), and will also provide funds for research and follow up work on claims filed under the Statute of Limitations prior to its expiration December 31, 1982.

Facilities Management

In FY 1983, $93.4 million is requested for Facilities Management which includes rental cost for facilities, operation and maintenance of all facilities including those used for Indian contracted programs, and Facilities Operation & Maintenance staff at all levels of the Bureau.

General Administration

In FY 1983, $69.1 million is requested for General Administration which includes, for all levels of the Bureau, Executive Direction, EEO, Administrative Services, ADP services, Safety Management, and Employee Compensation Payments to the Department of Labor. In addition, the Program Management costs for Indian Education, Construction, and Road Construction are included in this activity. This grouping of programs is new in FY 1983 as directed by Congress in FY 1982.

General Overhead Cost Reduction

In FY 1983, an overall reduction of $16.0 million will be absorbed from overhead through geographic and programmatic consolidations and implementation of more cost effective methods of program management and administration.

Indian Education Assistance

The FY 1983 Budget request includes $51.1 million for the Title IV program proposed for transfer from the Department of Education. The programs funded by this account will provide supplementary educational assistance to elementary and secondary programs for Indian students at public and tribal schools, as well as special assistance to Indian post-secondary students and adults.

Construction (Buildings & Utilities)

The FY 1983 Budget request for construction of Buildings and Utilities is $60.1 million, which includes $15.0 million for construction of Phase I of the Hopi Jr./Sr. High School in Arizona.

The program also includes $45.1 million for Facilities Improvement and Repairs. Funding requested will be used to correct unsafe and unsanitary conditions, to initiate high priority energy conservation projects, to correct functional deficiencies in existing Bureau facilities, and for preparation of plans, engineering supervision and surveys.

Irrigation Construction

The proposed FY 1983 Irrigation Construction program will provide a total of $45.9 million. Irrigation projects totaling $40.8 million will be funded, including legislatively mandated projects at Ak Chin, Arizona for $29.8 million (which is to be requested after enactment of additional authorizing legislation); at Fallon, Nevada for $1.0 million; $2.6 million for the Grass Rope Project in South Dakota; and $7.4 million for projects which promise a quick return on investment. Funding is being requested in the amount of $3.1 million for continuation of a major effort for assuring dam safety which was initiated in FY 1982. The request also includes $2.0 million for supervision and engineering for irrigation construction and rehabilitation work on Indian irrigation projects throughout the arid West.

Impact Aid: School Construction Affecting Indian Funds

This program was operated through the Department of Education in FY 1982. Funds were provided to construct public schools in districts serving areas of Indian lands which are large enough to adversely affect the taxable land base and which serve significant numbers of Indian students. The FY 1983 request of $0.8 million provides funds for staff to supervise the projects begun in prior years; new project funding is not requested.

Road Construction

New FY 1983 budget authority of $43.6 million is proposed for construction of the Indian road system. The proposed program will allow the Bureau to continue its efforts to provide a transportation network upon which economic, and social advancement may be achieved.

Loan Programs

Direct loans from the Revolving Loan Fund are projected at $19.97 million for FY 1983, up $5.2 million from FY 1982. These loans will be financed from available fund balances. Guaranteed and insured loans amounting to $15.8 million will be made in FY 1983, down $14.9 from FY 1982.

Fire Suppression Supplemental

The President's FY 1983 budget includes a FY 1982 supplemental of $7.0 million for fire suppression. These funds will be used for anticipated wildfire suppression, emergency prevention and rehabilitation efforts in FY 1982 on Indian forest and rangeland.

Consolidated Tribal Government Programs (CTGP)

The Bureau of Indian Affairs, in accord with Administration policy and Congressional approval, has initiated for FY 1982 a prototype block-funding project intended to provide tribes greater self-determination in the operation of Indian programs.

This program began as a part of the Administration's budget initiative for FY 1982 when the Bureau proposed a consolidation of ten program functions into a new activity entitled Consolidated Tribal Governmental Programs (CTGP). The proposal was based on giving each tribe the option of selecting, within an overall budget, the funding amounts and types of programs the tribe would operate during the budget year. Consolidated funds would then be distributed to tribes based on individual tribal decisions.

While Congress, in its budget review, suggested further study of the CTGP concept, the Administration was given approval to conduct a pilot project in each of the Bureau's twelve geographical areas. Consequently, the Bureau completed a detailed review of the CTGP concept and conducted initial consultation with tribes on the basic concept. Within this framework, the Bureau has initiated action to implement a CTGP prototype project in FY 1982. Individual tribal CTGP prototype projects are scheduled to begin in February 1982. This Administration initiative is intended to gain support from participating tribes so that the prototype effort may be extended to additional tribes in FY 1983.

DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

Buildings and Utilities Construction Program, Fiscal Year 1983
Summary of Projects

Arizona	
Hopi Jr./Sr. High School	$15,000,000
Total, New Construction	$15,000,000
Bureau-wide	
Facilities Improvement and Repair	$45,100,000
Program Management	$_________ a/
TOTAL	$60,100,000

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a/ Transferred to General Administration under the Operation of Indian Programs Appropriation in FY 1982.

DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

Irrigation and Power Construction and Rehabilitation		FY 1983 Estimate
Arizona		
Ak Chin	$ 29,900,000 a/	
Arizona Total		$ 29,800,000
Nevada		
Fallon	1,000,000	
Nevada Total		1,000,000
South Dakota		
Lower Brule (Grass Rope)	2,600,000	
South Dakota Total		2,600,000
Bureau-wide		
Small Irrigation Projects		7,400,000
Total Construction		40,800,000
Engineering and Supervision		2,000,000
Dam Safety Program		3,100,000
Total Program		$45,900,000

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a/ This amount is proposed for later submittal and will be made available upon enactment into law of additional authorizing legislation.

DEPARTMENT OF THE INTERIOR PROGRAM
for
TERRITORIAL AND INTERNATIONAL AFFAIRS

Fiscal Year 1983

The total budget authority requested in fiscal year 1983 is $187,776,000. Excluding supplementals requested for FY 1982, this amount represents a net decrease of about $30 million over the fiscal year 1982 appropriation and provides funding for the Trust Territory of the Pacific Islands, the Northern Mariana Islands, American Samoa, Guam, the Virgin Islands, the Federal Comptrollers' offices in each of the territories, and the Office of Territorial and International Affairs in Washington.

The total net decrease of $30 million from the fiscal year 1982 budget consists of a number of smaller increases and decreases. The major decrease is in the Virgin Islands, where a $21.5 million appropriation represented the final year of funding for construction of a new hospital. In Guam, a decrease in the amount of construction funds available (-$8.1 million) is partially offset by an increase in the amount available for economic development loans (+0.3 million). For American Samoa, a net decrease of $4.4 million is comprised of a decrease in funds for construction projects and special programs (-$6.0 million) partially offset by an increase in operations funding (+$1.2 million).

Funding for the Northern Mariana Laws Commission ($0.2) million was provided in fiscal year 1982. It is anticipated that the Commission will complete its work by September, 1982, thus no request is included in the 1983 budget for this purpose. A slight increase is requested for the Federal Comptrollers (+$0.2 million). For the Office of Territorial and International Affairs an increase of +$0.8 million is requested primarily to provide funding for the immediate office of the Assistant Secretary for Territorial and International Affairs.

The Covenant that established the Commonwealth of the Northern Mariana Islands provided for an annual increase in funds for the Commonwealth to offset the effect of inflation. This amount for fiscal year 1983 is $1.7 million. The FY 1983 budget also includes for the Northern Marianas $4 million as the first increment of construction funding for the new hospital. Planning money was made available in FY 1982.

The total funding requested for the Trust Territory of the Pacific Islands is $.6 million below the 1982 appropriation. This difference consists of increases of $1.4 million for basic operations, $.4 million for fuel and other contingencies, $1 million for satellite communications, and $5.0 million for relocation of capitals, and decreases of $3.2 million for enhanced operations and maintenance, and $3.3 million for capital improvement projects.

Special fiscal assistance payments to Guam and the Virgin Islands remain constant for FY 1983.

$75,500,000 requested for the Trust Territory

The United States, through the Department of the Interior, administers the Trust Territory of the Pacific Islands under a Trusteeship Agreement with the Security Council of the United Nations. As Administering Authority, the United States is obligated to promote the political, economic, and educational development of the Micronesian people. The Trust Territory covers a water area of 3 million square miles with a land area of 516 square miles in some 2,000 islands. The population (excluding the Northern Marianas) is approximately 120,000.

The FY 1983 operations budget proposed for the Trust Territory headquarters and the three emerging governments of Palau, the Federated States of Micronesia, and the Marshall Islands, totals $66,400,000. This amount includes the following:

Federated States of Micronesia	$35,137,000
Marshall Islands Government	10,358,000
Republic of Palau	9,575,000
Trust Territory Headquarters	4,630,000
Enhanced Operation and Maintenance	1,500,000
Satellite Communications	1,000,000
Contingency Reserve	2,800,000
College of Micronesia	1,400,000
Total Operations	$66,400,000

Other funding for the Trust Territory includes $7,800,000, the second increment of the United States' contribution, for the purpose of establishing new capitals in each of the three emerging areas. The initial increment was provided in FY 1982 and was for architectural design work. The budget also includes funding for special supplementary feeding and other support programs for the people of Enewetak ($800,000) and Bikini ($500,000).

$3,665,000 requested for Guam

The requested funding includes $500,000 for the Guam Economic Development Loan Fund for loans and loan guarantees to businessmen who are working to develop local resources, such as, fishing and agriculture. In addition, $3,165,000 is requested for capital improvements for: port expansion ($1,100,000); and water systems development ($2,065,000).

$20,383,000 requested for American Samoa

The request includes $18,903,000 for the operation of the local government, $430,000 for school improvements, $375,000 for road construction, and $675,000 to purchase a much needed tugboat. Also, legislation is proposed to authorize Federal loan guarantees to American Samoa in the amount of $8 million for installation of additional power generating capacity.

$28,143,000 requested for the Northern Mariana Islands

The request includes $24,143,000 for grants to the Northern Mariana Islands as mandated by law (Public Law 94-241), and $4 million to initiate construction funding for a new hospital. The Covenant grants will provide $14,228,000 for government operations, $6,897,000 for capital improvements, and $3,018,000 for economic development.

$3,300,000 requested for the Federal Comptrollers

The request will provide direct funding for the Federal Comptrollers' activities in Guam, American Samoa, the Virgin Islands, and the Trust Territory/Northern Mariana Islands.

$2,585,000 requested for Territorial Administration, International Affairs, and Technical Assistance

This request will provide direct funding to administer territorial and international affairs and contract funding for technical assistance to the territories in areas, such as, financial management.

$54,200,000 requested for Fiscal Assistance

This request is the estimate of the return to Guam and the Virgin Islands of certain revenues collected by the Internal Revenue Service, as provided for in Public Law 95-348.

FY 1982 Supplemental Requests

Included with the FY 1983 budget are requests for FY 1982 supplementals for: the relocation and resettlement of Bikinians, $21,000,000; and the annual Northern Mariana's inflation adjustment, $3,402,000, as required by law.

DEPARTMENT OF THE INTERIOR

Comparison of FY 1982 with FY 1983 Budget Authority

(In thousands of dollars)

Bureau or Office and Appropriation Title	1982 Appropriation Enacted to Date	Net Transfers and Requested Supplementals	1982 Amount Requested	FY 1983 Estimate	Increase (+) Decrease (-) 1982 Compared with 1981
LAND AND WATER RESOURCES					
Bureau of Land Management					
Management of lands and resources	355,326	60,000	415,326	373,527	- 41,799
Construction, access and land acquisition	15,223	--	15,223	2,711	- 12,512
Payments in lieu of taxes	95,520	--	95,520	45,000	- 50,520
Oregon & California grant lands	52,788	--	52,788	52,883	+ 95
Range improvements	13,226	--	13,226	11,048	- 2,178
Service charges, deposits & forfietures	9,600	--	9,600	10,000	+ 400
Subtotal	541,683	--	601,683	495,169	-106,514
Permanent and trust funds	597,399	--	597,399	761,161	+163,762
Budget Authority, Total	1,139,082	60,000	1,199,082	1,256,330	+ 57,248
Outlays, Total	1,118,221	60,000	1,178,221	1,230,089	+ 51,868

DEPARTMENT OF THE INTERIOR

Comparison of Fiscal Year 1982 with Fiscal Year 1983 Budget Authority
(In thousands of dollars)

Bureau or Office and Appropriation	1982 Appropriation	Requested Supplementals	1982 Amount Requested	Fiscal Year 1983 Estimate	Increase or Decrease (-) 1983 compared with 1982
LAND AND WATER RESOURCES					
BUREAU OF RECLAMATION					
General Investigations	30,596	---	30,596	36,485	5,889
Construction Program	548,505	---	548,505	666,585	118,080
Operation and Maintenance	118,518	---	118,518	140,850	22,332
Loan Program	22,614	---	22,614	39,600	16,986
Emergency Fund	---	---	---	1,000	1,000
General Administrative Expenses	39,928	---	39,928	49,300	9,372
Subtotal	760,161	---	760,161	933,820	173,659
Permanent and Trust Funds	11,052	---	11,052	16,500	5,448
Budget Authority, Total	771,213	---	771,213	950,320	179,107
Outlays, Total	843,123	---	843,123	946,150	103,027

DEPARTMENT OF THE INTERIOR

Comparison of Fiscal Year 1982 with Fiscal Year 1983 Budget Authority
(In thousands of dollars)

Bureau or-Office and Appropriation	1982 Appropriation	Net Transfers and Requested Supplementals	1982 Amount Requested	Fiscal Year 1983 Estimate	Increase or Decrease(-) 1983 Compared with 1982
FISH AND WILDLIFE AND PARKS					
Fish and Wildlife Service					
Resource Management	220,350	1,800	222,150	218,922	-3,228
Construction	6,683	...	6,683	12,705	6,022
Land Acquisition	16,491	...	16,491	1,567	-14,924
Migratory Bird Conservation Account - Advance Appropriation	1,200	...	1,200	...	-1,200
National Wildlife Refuge Fund - Payments in Lieu of Taxes	5,760	...	5,760	...	-5,760
Subtotal, Annual Appropriations	250,484	1,800	252,284	233,194	-19,090
Permanent and Trust Funds	169,271	...	169,271	182,909	13,638
Budget Authority, Total	419,755	1,800	421,555	416,103	-5,452
Outlays, Total	410,942	1,700	412,642	386,323	-26,319

DEPARTMENT OF THE INTERIOR

Comparison of FY 1982 with FY 1983 Budget Authority
(In thousands of dollars)

Bureau or Office and Appropriation Title	1982 Appropriation	Net Transfers and Requested Supplementals	1982 Amount Requested	Fiscal Year 1983 Estimate[a]	Increase or Decrease (-) 1983 Compared with 1982
FISH AND WILDLIFE AND PARKS (Cont'd)					
National Park Service					
Operation of the National Park System	512,882	2,200	515,082	539,703	24,621
National Recreation and Preservation	12,372	--	12,372	6,987	-5,385
Urban Park and Recreation Fund	7,680	--	7,680	--	-7,680
Historic Preservation Fund	25,440	--	25,440	--	-25,440
Construction	85,172	--	85,172	123,721	38,549
Land Acquisition	103,462	--	103,462	59,776	-43,686
John F. Kennedy Center for the Performing Arts	4,142	--	4,142	3,986	-156
Subtotal, Annual Appropriations	751,150	2,200	753,350	734,173	-19,177
Miscellaneous Permanent and Trust Funds	2,169	--	2,169	2,105	-64
Other Accounts	30,000	--	30,000	--	-30,000
Budget Authority, Total NPS	783,319	2,200	785,519	736,278	-49,241
Outlays, Total	1,220,510	2,200	1,221,501	990,167	-231,334

[a] Includes $105 million for the Park Restoration and Improvement Program as follows:
Operation of the National Park System.............$42 million
Construction....................................... 63 million

DEPARTMENT OF THE INTERIOR

Comparison of FY 1982 with FY 1983 Budget Authority

(In thousands of dollars)

Bureau or Office and Appropriation Title	1982 Appropriation Enacted to Date	Net Transfers and Requested Supplementals	1982 Amount Requested	FY 1983 Estimate	Increase (+) Decrease (-) 1982 Compared with 1981
ENERGY AND MINERALS					
U.S. Geological Survey					
Surveys, investigations & research	494,545	--	494,545	507,577	+ 13,032
Barrow area gas operation, exploration and development	--	--	--	6,400	+ 6,400
Exploration of national petroleum reserve in Alaska	2,196	--	2,196	--	- 2,196
Digital cartography	--	--	--	3,873	+ 3,873
Subtotal	496,741	--	496,741	517,850	+ 21,109
Permanent and trust funds	--	--	--	--	--
Budget Authority, Total	496,741	--	496,741	517,850	+ 21,109
Outlays, Total	572,711	--	572,711	519,905	- 52,806
Office of Surface Mining					
Regulation and technology	58,515	--	58,515	62,173	+ 3,658
Abandoned mine reclamation fund	102,082	--	102,082	97,649	- 4,433
Subtotal	160,597	--	160,597	159,822	- 775
Permanent and trust funds	--	--	--	--	--
Budget Authority, Total	160,597	--	160,597	159,822	- 775
Outlays, Total	136.966	--	136,966	146,348	- 9,382

DEPARTMENT OF THE INTERIOR

BUREAU OF MINES

Comparison of Fiscal Year 1982 with Fiscal Year 1983 Budget Authority

(In thousands of dollars)

	1982 Appropriation	Net Transfers and Requested Supplementals	1982 Amount Requested	Fiscal Year 1983 Estimate	Increase or Decrease (-) 1982 Compared With 1983
Bureau of Mines					
Mines and Minerals	145,885	4,717	150,602	124,676	-25,926
Trust Funds	800	--	800	800	--
Budget Authority, Total	146,685	4,717	151,402	125,476	-25,926
Outlays, Total	151,357	1,944	153,301	136,100	-17,201

DEPARTMENT OF THE INTERIOR

Comparison of FY 1982 with FY 1983 Budget Authority
(In thousands of dollars)

	1982 a/ Appro-priation	Net Transfer b/ & Supplementals	1982 Amount Requested	Fiscal Year 1983 Estimate	Inc. (+) or Dec.(-) 1983 Compared with 1982
Bureau of Indian Affairs					
Operation of Indian Programs	802,220	7,000	809,220	849,250	+40,030
Indian Education Assistance	77,852 c/	-6,255	71,597	51,119	-20,478
Construction	93,628	---	93,628	106,000 d/	+12,372
Impact Aid: School Const. Affecting Indian Lands	9,000 c/	---	9,000	838	-8,162
Road Construction	47,160	---	47,160	43,585	-3,575
Total, Federal Appropriations	1,029,860	745	1,030,605	1,050,792	+20,187
Permanent and Trust Funds..........	568,400	---	568,400	601,200	+32,800
Budget Authority, Total BIA........	1,598,260	745	1,599,005	1,651,992	+52,987
Outlays, Total.....................	1,460,589	745	1,461,334	1,510,742	+49,408

a/ Amounts shown are net appropriations as authorized by P. L. 97-100, making appropriations for the Department of the Interior and Related Agencies, 1982.

b/ Includes pending fire suppression supplemental requested in the FY 1983 budget (Operation of Indian Programs) and a FY 1982 rescission proposed for the Indian Education Assistance program.

c/ Programs included in the Department of Education in FY 1982.

d/ Includes 29,800 for Ak Chin Irrigation Project proposed for later transmittal, proposed legislation.

e/ Includes 96,876 in estimated outlays by the programs proposed for tranfer from the Department of Education.

DEPARTMENT OF THE INTERIOR

Comparison of Fiscal Year 1982 with Fiscal Year 1983 Budget Authority
(In thousands of dollars)

	1982 Appropria-tion	Net Trans-fers and requested Supplementals	1982 Amount Requested	Fiscal Year 1983 Estimate	Increase or Decrease (-) 1983 Compared with 1982
Office of Territorial and International Affairs					
Administration of Territories	86,990	3,402	90,392	58,076	-32,216
Trust Territory of the Pacific Islands	76,157	21,000	97,157	75,500	-21,657
Payments to the U.S. Terri-tories, Fiscal Assistance	54,200	---	54,200	54,200	---
Total, Office of Territorial and International Affairs	217,347	24,402	241,749	187,776	-53,973
Outlays	241,709	4,330	246,039	223,055	22,984

DEPARTMENT OF THE INTERIOR

Comparison of FY 1982 with FY 1983 Budget Authority

(In thousands of dollars)

Bureau or Office and Appropriation Title	1982 Appropriation Enacted to Date	Net Transfers and Requested Supplementals	1982 Amount Requested	FY 1983 Estimate	Increase (+) Decrease (-) 1982 Compared with 1981
SECRETARIAL OFFICES					
Office of the Solicitor					
Salaries and expenses	17,600	--	17,600	19,071	+ 1,471
Budget Authority, Total	17,600	--	17,600	19,071	+ 1,471
Outlays, Total	17,071	--	17,071	18,498	+ 1,427
Office of the Secretary					
Departmental management	40,737	-524	40,213	44,157	+ 3,944
Construction management	3,840	--	3,840	--	- 3,840
Office of the Inspector General	10,339	-120	10,219	11,400	+ 1,181
Youth Conservation Corps	4,200	--	4,200	--	- 4,200
Budget Authority, Total	59,116	-644	58,472	55,557	- 2,915
Outlays, Total	60,545	-644	59,901	57,422	- 2,479

Office of Budget
February 1, 1982

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON, D.C. 20240

NATIONAL PARK SERVICE - REGULAR FISCAL 1983 CONSTRUCTION PROGRAM

PARK	Pkg. No.	TITLE	Dollar Amount in Thousands
Allegheny Portage Railroad NHS	115	Replace Unsafe Maintenance Facility	499
Booker T. Washington NM	101	Install Fire Alarm System	87
Denali NP and Preserve	116	Underground Fuel Storage Facilities	950
Gateway NRA	149	Rehabilitate Great Kills Seawall (Phase I)	3,673
George Rogers Clark NHS	119	Repair Memorial Roof, Clean and Repoint Masonry Walls	670
Glacier Bay NP and Preserve	106	Rehabilitate Bartlett Cove Dock	1,170
Glen Canyon NRA	281	Complete Marina and Support Facilities (Replace Rainbow Marina) (Phase III)	3,883
Grand Canyon NP	411	Modifications to Roaring Springs Pump House	406
Grand Teton NP	104	Improve Day-Use Facilities, Leeks Lodge	1,861
Grand Teton NP	201	Rebuild 7.5 Miles Balance of Colter Bay - North Boundary Road	3,013
Grand Teton NP	310	Improve Beaver Creek-Moose Water System (Headquarters)	474
Montezuma Castle NM	124	Relocate Sewage Lagoon	393
National Capital Parks-Central	427	Repair Kutz Bridge	3,900
National Visitor Center	—	Reimburse Deferred Fiscal 1982 Construction Projects	3,189
North Cascades NP	269	Rehabilitate Water and Sewer Systems, Diablo Lake	668
Olympic NP	261	Lake Crescent Highway Reconstruction (Phase II)	4,061
Prince William Forest Park	135	Rehabilitate Utilities Cabin Camp I	555
Rock Creek Park	206	Rehabilitate Retaining Walls, Rock Creek	1,724
Rocky Mountain NP	232	Rehabilitate 3 Water Systems	1,518
Shenandoah NP	125	Reconstruct Portions of Skyline Drive (35 Miles) South District (Phase I)	4,001
Yellowstone NP	620	Rehabilitate Purchased Concessioner Facilities (Portion)	7,499
Yosemite NP	363	Fire Protection Wawona Hotel Complex	2,358
		Total	46,552

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

CAPITAL IMPROVEMENT PROJECTS FOR FISCAL 1983 PARK RESTORATION AND IMPROVEMENT PROGRAM

PARK	Pkg. No	Project Description	Dollar Amount in Thousands
Amistad RA	124	Upgrade Utility Systems, Pecos Canyon	876
Buffalo NR	164	Rehabilitate Roadways and Campsites, Buffalo Point	927
Cape Hatteras NS	175	Stabilize Shoreline to Protect Lighthouse	1,200
Chaco Culture NHP	139	Reconstruct Tour and Circulation Roads	2,751
Chickasaw NRA	156	Reconstruct Deteriorated Park Roads	1,725
Gateway NRA	150	Rehabilitate Road System (Sandy Hook)	1,965
Great Smoky Mountains NP	266	Reconstruct Two Bridges at Tremont	1,480
Guadalupe Mountains NP	110	Construct Trail System, Phase IV	1,664
Haleakala NP	821	Headquarters Water and Fire Protection System	2,096
Hawaii Volcanoes NP	110	Widen and Resurface 4 Miles of Park Road	1,572
Jefferson National Expansion Memorial NHS	201	Rehabilitate Exterior of Old Courthouse	2,266
Martin Van Buren NHS	102	Rehabilitate Historic Structure	878
Mesa Verde NP	101	Build New 5.3 Mile Entrance Road to Bypass Slide Area	8,621
Mesa Verde NP	117	Construct 11 Ruins Shelters and Provide Exhibits, Chapin and Wetherill Mesas	4,144
Padre Island NS	156	Reconstruct Deteriorated and Unsafe Sections of Main Road	1,136
Petrified Forest NP	140	Reconstruct Deteriorated Mainline Road	2,882
Petrified Forest NP	150	Protect Water System and Park Road	295
Perry's Victory and Int'l Peace Memorial	101	Memorial Column Rehabilitation (Phase II)	2,444
Point Reyes NS	191	Rehabilitate Water Storage Facilities	426

Rocky Mountain NP	106	Rebuild 11-Mile Phantom Valley - Grand Lake Section of Trail Ridge Road	8,904
Scotts Bluff NM	111	Construct Waterline and Pumping Station	507
Shenandoah NP	118	Reconstruct Portion Skyline Drive (35 Miles) Central District (Phase II)	2,160
Theodore Roosevelt NP	148	Rebuild 6-Mile Entrance Road (North Unit)	4,043
Voyageurs NP	158	Construct Breakwater, Docks, Parking, Comfort Station, Picnic Sites, Road and Utilities, Black Bay	2,690
Wupatki NM	103	Reconstruct Hazardous Sections of Main Loop Road	3,303
		Subtotal	60,955
		Fiscal 1983 Grand - Total, Construction	107,507

U.S. DEPARTMENT OF THE INTERIOR

FY 1983 BUDGET HIGHLIGHTS

FOREWARD

The purpose of this book is to highlight and summarize the Interior Department's 1983 Budget for Members of Congress, Departmental officials, and other interested parties.

The "Summary and Departmental Highlights" section gives an overview of the major directions and actions proposed in the Secretary's 1983 Budget and discusses by major activity or program the 1983 changes from the 1982 level. This section is followed by a list of 1982 supplemental appropriation requests being transmitted with the President's Budget and 1982 transfers, and a list of authorizing legislation required for certain items requested in the 1983 Budget.

Department-wide statistical tables compare the 1983 Estimate with the 1982 Estimate (Table 1) and with the 1983 Base Budget (Table 2). The "base budget" is the cost of continuing current 1982 services and programs in 1983, with adjustments made for transfers, unavoidable cost increases, and certain other increases and decreases. Table 3 shows actual receipts for 1981 and estimated receipts for 1982 and 1983. Table 4 is a combined graph and table showing trends from 1980 through 1983 in Full-Time Equivalent (FTE) employment in terms of staff-years.

Next, information is presented on a bureau-by-bureau basis comparing the Estimate for 1983 with that of 1982 in terms of full-time equivalent employment and amounts appropriated to date, transfers, proposed supplementals, proposed legislation, and reimbursements. For each appropriation, information is provided on FTE totals and amounts by activity and subactivity. Program changes from the 1983 base budget are briefly identified and explained.

The Appendix includes tables listing individual construction projects by bureau and state, land acquisition projects and authorization data, and a section on the implementation of the Alaska Lands Act.

Note: All years referred to as fiscal years and all amounts shown as budget authority unless otherwise specified. Detail in tables may not add to totals because of rounding.

DEPARTMENT OF THE INTERIOR

PROPOSED FISCAL YEAR 1983 BUDGET

SUMMARY AND DEPARTMENTAL HIGHLIGHTS

The President's 1983 budget for the Department of the Interior totals $7,264 million in gross authority, an increase of $521 million over the anticipated 1982 level of $6,743 million excluding fire supplementals and Park Service contract authority. Receipts which offset budget authority are expected to total $3,994 million in 1983, leaving a net budget authority total of $3,270 million.Not included in the receipt estimates above are Outer Continental Shelf Leasing receipts, which are projected to be about $7,900 million in 1982 and $18,000 million in 1983. These receipts are offset against the total Federal budget.

COMPARISON OF 1982 and 1983 BUDGET AUTHORITY AND OUTLAYS

(Dollar Amounts in Millions)

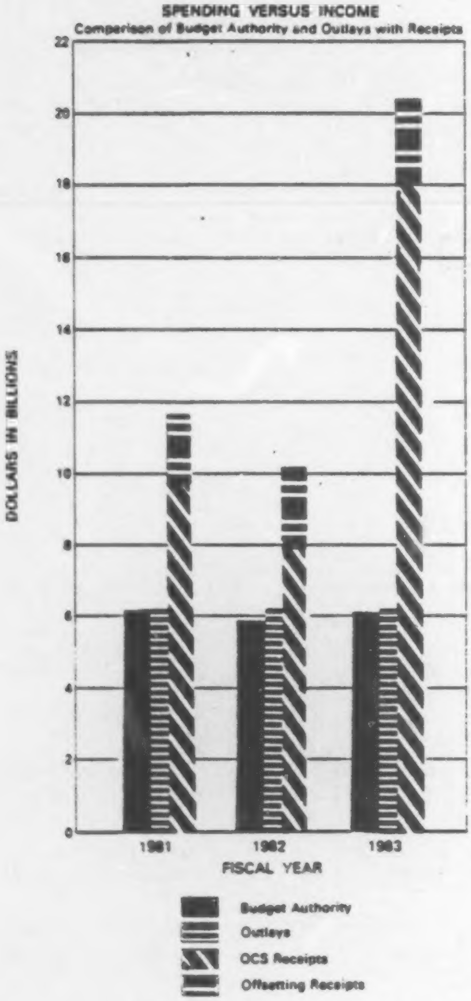
	1982 1/	1983	Change
BUDGET AUTHORITY			
Interior Programs 2/			
Gross Budget Authority	5,813	6,076	+263
Offsetting Receipts	-2,412	-2,498	-86
Net Budget Authority	3,401	3,578	+177
Energy Programs 3/			
Gross Budget Authority	930	1,188	+258
Off-Budget Amounts	(3,684)	(2,074)	(-1,610)
Offsetting Receipts	-1,503	-1,496	+7
Net Budget Authority	-573	-308	265
Total, Department of the Interior			
Gross Budget Authority	6,743	7,264	+521
Offsetting Receipts	-3,915	-3,994	-79
Net Budget Authority	2,828	3,270	+442
OUTLAYS			
Interior Programs			
Gross Outlays	6,265	6,169	-96
Offsetting Receipts	-2,412	-2,498	-86
Net Outlays	3,853	3,671	-182
Energy Programs			
Gross Outlays	718	1,095	+377
Off-Budget Amounts	(2,834)	(2,774)	(-60)
Offsetting Receipts	-1,503	-1,496	+7
Net Outlays	-785	-401	384
Total, Department of the Interior			
Gross Outlays	6,983	7,264	+281
Offsetting Receipts	-3,915	-3,994	-79
Net Outlays	3,068	3,270	+202

1/ Excludes $71.0 million in fire supplementals and $30.0 million in National Park Service contract authority.

2/ Includes $80.6 million in 1982 and $51.9 million in 1983 for Indian education programs to be transferred in FY 1983 from the Department of Education under proposed legislation. FY 1982 dollars are shown for comparative purposes.

3/ These energy programs would be transferred from the Department of Energy in FY 1983 under proposed legislation. FY 1982 dollars are shown for comparative purposes.

U.S. DEPARTMENT OF THE INTERIOR



Note: Amounts shown exclude Department of Energy programs, include 1982 proposed supplementals for firefighting and National Park Service contract authority.

1983 BUDGET INCREASES

The proposed 1983 budget includes increased funding for:
- expanding and accelerating both onshore and offshore energy leasing activities
- restoring and improving National Park facilities
- continuing construction of Western water projects
- improving the Department's royalty management system

Other increases are for:
- State revenue sharing payments
- State regulatory and reclamation grants for surface mining
- Assistance to small tribes and Indian economic development

1983 BUDGET DECREASES

Reductions which partially offset these increases are:
- Decreases in the land acquisition program
- Elimination of Urban Park and Recreation Rehabilitation grants and Historic Preservation grants
- Decreases in Payments in Lieu of Taxes to local governments
- Reduction in BIA general overhead costs
- Termination of funding for mineral and water institutes
- Transferring or closing 31 fish hatcheries and 20 other FWS facilities

1982 PROPOSED SUPPLEMENTALS

These include:
- Emergency fire fighting costs for the Bureau of Land Management, Bureau of Indian Affairs, National Park Service, and Fish and Wildlife Service ($71.0 million)
- Construction of a Bureau of Mines facility ($4.1 million)
- In the territories, resettlement of Bikini Islanders ($21.0 million) and an inflation adjustment for the Northern Mariana Islands ($3.4 million)

ENERGY LEASING PROGRAMS

One of the Department's highest priorities is to accelerate and streamline its energy leasing activities and encourage the development of the Nation's energy resources in order to strengthen the economy, increase Federal revenue and reduce our dependence on foreign sources of energy. The mission of many of the Department's major programs is to accelerate the leasing and development of oil, gas, coal, and geothermal resources, and to move ahead with the development of oil shale and tar sands resources. These are accomplished primarily through the Bureau of Land Management and the newly created Minerals Management Service, The Minerals Management Service was created by Secretarial Order on January 19, 1982 to take over all the responsibilities of the Conservation Division of the U.S. Geological Survey including responsibility for the supervision of mineral leases and ensure the full collection of Federal and Indian royalties.

Excluding proposed transfers from the Department of Energy, the 1983 budget proposes a total of $201.1 million for energy leasing activities, an increase of $2.2 million over the 1982 estimated level. Moreover, revenues are projected to increase from $7.9 billion in 1982 to $18 billion in 1983 for offshore oil and gas leasing on the Outer Continental Shelf. FY 1983 revenues from mineral leasing on the public lands are estimated at $1.297 billion, compared with $1.362 billion projected for FY 1982. The difference in onshore receipts between 1982 and 1983 is attributed primarily to the release in 1982 of about $135 million from oil shale and onshore oil and gas leasing activities, which had been held in escrow.

The following table provides a summary of funding directly related to the Department's energy leasing programs:

(Dollar amounts in thousands)

Offshore Oil and Gas Leasing	1982	1983	Change
Bureau of Land Management	39,738	43,950	+4,212
Minerals Management Service	65,159	66,684	+1,525
OCS Program Coordination	483	535	+52
Fish and Wildlife Service	334	334	—
TOTAL	105,714	111,503	+5,789
Onshore Oil and Gas Leasing			
Bureau of Land Management	17,553	21,620	+4,067
Minerals Management Service	22,547	23,594	+1,047
TOTAL	40,100	45,214	+5,114
Coal Leasing			
Bureau of Land Management	17,757	15,789	-1,968
Minerals Management Service	12,702	9,579	-3,123
Office of Surface Mining	11,453	7,100	-4,353
Fish and Wildlife Service	2,054	1,570	-484
TOTAL	43,986	34,038	-9,928
Geothermal Leasing			
Bureau of Land Management	2,233	2,822	+589
Minerals Management Service	1,822	1,855	+33
Fish and Wildlife Service	100	—	-100
TOTAL	4,155	4,677	+522
Oil Shale Leasing			
Bureau of Land Management	3,399	3,791	+392
Minerals Management Service	1,119	1,148	+29
Fish and Wildlife Service	200	—	-200
TOTAL	4,718	4,939	+221
Tar Sands Leasing			
Bureau of Land Management	217	750	+533
Fish and Wildlife Service	100	—	-100
TOTAL	317	750	+433
GRAND TOTAL	198,970	201,121	+2,151

Offshore Oil And Gas Leasing

- OCS Leasing Sales. In 1983, the Department plans to implement the proposed five-year leasing schedule to accelerate and streamline oil and gas leasing on the Outer Continental Shelf (OCS). Nine sales are proposed for 1983: three in the Gulf of Mexico; one each in the Mid-Atlantic, South Atlantic, and Central and Northern California; and, in Alaska, in the Norton Basin, St. George Basin, and North Aleutian Shelf.

- Revenues. The OCS Program brings in significant revenue to the Federal Government. Receipts are expected to increase in 1983 to an estimated $18.0 billion, a 128% increase over the 1982 receipts of $7.9 billion.

- Pre-leasing Studies. Additional funding is proposed in 1983 for environmental studies and area-wide oil and gas resource analysis.

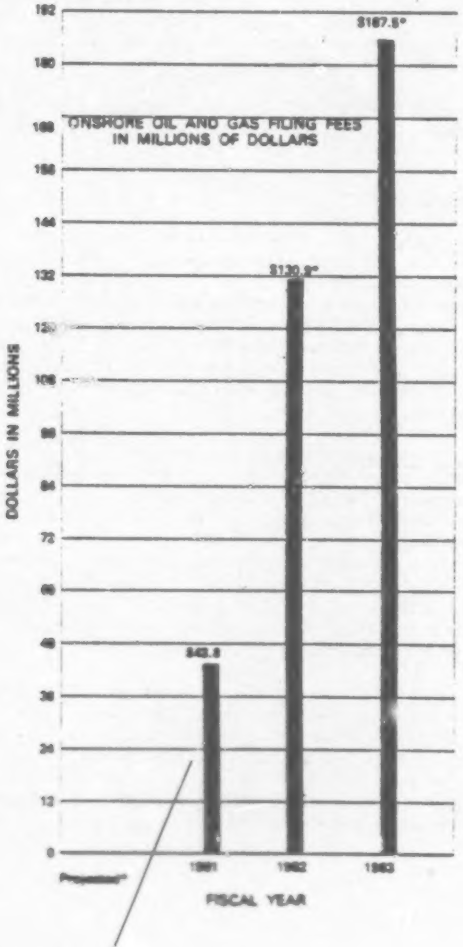
Onshore Oil And Gas Leasing

- Leasing Activities. Growing interest on the part of industry in onshore oil and gas leasing as a result of world oil price increases, and the Department's efforts to accelerate its work in this area are reflected by the increased revenues generated from this activity. Receipts from oil and gas leasing on the public lands have grown from $340.3 million in 1978 to more than $1 billion per year projected for 1982 and 1983. Increased leasing activity in 1983 will focus on reducing the backlog of lease applications.

- Royalty Management. Another important activity in this area is continued improvement of the royalty management system combined with increased inspections of onshore oil and gas leases. An increase is requested in 1983 for the development and implementation of a Production Accounting and Auditing System that will allow the comparison of royalty and sales data with recorded production data on a lease-by-lease basis. The recommendations of the Commission of Fiscal Accountability of the Nation's Energy Resources are being reviewed, including the possible need for additional resources in FY 1982 and FY 1983.

- Alaska Leasing. Leasing for oil and gas in Alaska, both within and outside of the National Petroleum Reserve (NPR-A) is proceeding. Efforts initiated in 1982 will continue in 1983 for leasing Federal lands which had been closed prior to the passage of the Alaska National Lands Interest Conservation Act. The first planned sale in the NPR-A was held on January 27, 1982. A second sale is scheduled for this spring.

- Increasing Filing Fees. In order to reduce opportunities for fraud and to limit casual speculation for leases in the onshore oil and gas leasing program, the Department has increased the filing fee from $25 to $75. As shown on the chart below, this has resulted in estimated fees of $130.9 million in 1982 collections and $187.5 million in 1983 over collections of $43.8 million in 1981.



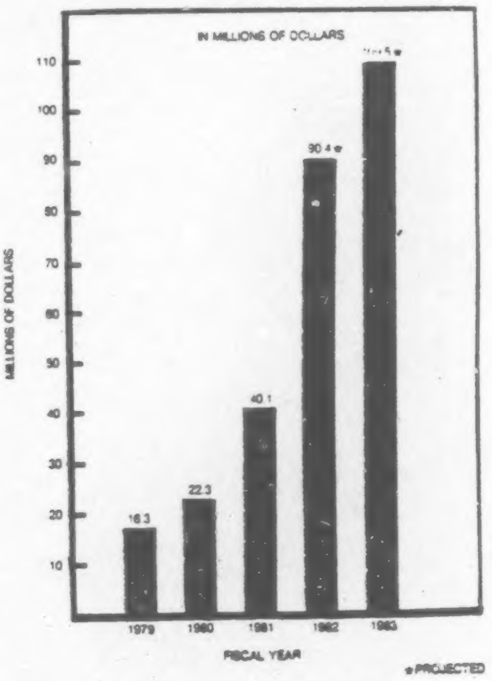
Coal Leasing

- Expanded coal production. This continues to be a major Departmental priority. In 1983 two lease sales will be held in Fort Union, North Dakota, and the San Juan River, New Mexico. Annual coal production from Federal leases has increased from 10.1 million tons, or 1.8 percent of national production in calendar year 1971 to 69.1 million tons, or 8.3 percent of national production, in calendar year 1980. The latest estimate for calendar year 1981 is a production level totaling about 95 million tons.

- Budgetary savings. Savings have resulted in 1983 from efforts to make this program more efficient. For example, fewer technical investigations will be conducted and some lower priority inventory work will be deferred. Because fair market value determinations will be based primarily on existing data, there will be less need in 1983 for pre-lease government drilling. Workload associated with reviewing mine plans is also expected to decrease.

- Revenues. As shown on the chart below, revenue from coal leasing has increased significantly, from $16.3 million in 1979 to a projected $90.4 million in 1982 and $109.5 million in 1983.

COAL LEASING REVENUES



Other leasing activities are:

- Geothermal Leasing. The 1983 budget anticipates increased activity in geothermal production. This is expected primarily because of recent Departmental policy decisions setting time limits for processing noncompetitive lease applications, holding competitive lease sales for all unleased known geothermal resource areas, and implementing a simultaneous leasing procedure to allow relinquished leases to be reoffered. Additional funds in 1983 will be used to issue more simultaneous noncompetitive leases and to increase post-lease activities such as processing notices of intent and geothermal drilling permits.

- Oil Shale Leasing. Funding increases are proposed in 1983 to establish a permanent oil shale leasing program. Funds are also included to support activities related to the prototype leasing program. Up to two prototype oil shale leases will be issued in 1983, and leases under the permanent program are scheduled to be issued by March 1984.

- Tar Sands Leasing. The 1983 program will continue work on the tar sands leasing program so that the first lease sale might be held early in 1984. As a result of recently enacted legislation which clarified the definition of tar sands, regulations are being developed to convert some oil and gas leases to combined hydrocarbon leases.

NATIONAL PARKS AND REFUGES

National Park Service

The 1983 budget will address major deficiencies in park facilities and serious resource preservation problems.

- Park Restoration and Improvement Program (PRIP). The park restoration and improvement initiative is an investment in the nationally significant resources held in trust for all Americans by the Park Service. Many facilities in the Park System built during the 1930's have simply worn out. Recent GAO reports document such problems as road deterioration, hazardous visitor accommodations, and inadequate water and sewer systems--all resulting from the lack of sufficient maintenance and repair funds. The 1983 request covers 46 projects in 40 parks for rehabilitation of water and sewer systems, fire and safety improvements in public buildings, reconstruccion of unsafe roads and bridges, pollution and erosion control, and preservation of historic structures.

- PRIP Request. The President's 1983 Budget requests $105 million as the second increment of the Administrations's original 5-year, $525 million program to restore and improve NPS facilities*. The Administration proposes that the $105 million initiative be appropriated from the Land and Water Conservation Fund. This request, together with other similar NPS construction and maintenance funding, will provide a total of $191 million for restoration and improvement projects this year.

- PRIP Activities. Total NPS funding in millions of dollars for all restoration and improvement activities from 1979 to 1983 is as follows:

	1979	1980	1981	1982	1983
Health and Safety Projects..	---	---	18.0	17.3	18.0
Cyclic Maintenance: Repair and Rehabilitation........	14.0	10.3	13.9	37.2	33.8
Cultural Resources Preservation..............	4.2	4.2	4.2	15.3	15.9
Capital Improvements........	118.5	108.2	43.4	85.2	123.7
Total................	136.7	122.7	79.5	155.0	191.4

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* In September 1981, the President reduced the FY 1982 request from $105 million to $92.4 million, as part of an overall budget reduction. Congress subsequently appropriated $76 million of the original request.

- Recreation Fees. The President's 1983 Budget proposes increases in recreation, entrance and user fees for areas administered by the National Park Service (NPS) as well as fees charged by the Bureau of Land Management (BLM) and the Fish and Wildlife Service (FWS). In addition, the budget proposes that the recreation fee revenues be retained by the collecting bureau for appropriation in future fiscal years and that the legislative prohibition on raising National Park Service entrance fees be eliminated. The budget estimates that NPS recreation fee revenues will rise from $23 million in 1982 to $51 million in 1983. BLM fees are estimated to go from $.3 million to $.9 million and the FWS fees are estimated at $95,000 in 1982 and $115,000 in 1983.

- Categorical Grant Programs. No funding is requested for the categorical grant programs of the Land and Water Conservation Fund, the Urban Park and Recreation Fund, or the Historic Preservation Fund. An increase of $.7 million, for a total of $.9 million, is requested to meet the increased workload resulting from the Administration's enhancement of tax incentives for historic preservation and from the elimination in 1983 of State historic preservation grants.

Fish and Wildlife Service

The Fish and Wildlife Service FY 1983 budget includes substantial increases targeted for improving management at the Nation's refuges, hatcheries, and research facilities. Through expansion of its programs for minor rehabilitation and cyclical maintenance at the refuges and the 58 remaining fish hatcheries (+10.1 million), the maintenance of facilities and other equipment required to effectively protect the existing land base, and management of the habitat will be substantially improved.

- Rehabilitation Projects. The FY 1983 construction budget of $12.7 million proposes increases for major rehabilitation projects designed to maintain or increase fish production, insure the health and safety of the visiting public and federal employees at refuges, hatcheries and research facilities (+6.0 million).

- Public Use Programs. The Budget also includes an increase to strengthen public use programs at refuges and hatcheries through restoration of visitor facilities and expansion of interpretation and informational activities (+1.4 million).

- Wetlands Mapping. A high priority has been placed on accelerated mapping for critical wetland areas (+1.1 million over the FY 1982 level of $2.5 million).

- Federal Aid Receipts. Federal aid receipts to fund State resource protection activities are projected to increase dramatically in FY 1983 (+13.3 million over the FY 1982 level of $144.9 million).

- Facility Transfers and Closures. The 1983 fishery resources budget of $32.9 million includes a $3.7 million reduction associated with the proposed transfer to the States or closure of 31 fish hatcheries. Five Fishery Research Stations and 12 Fishery Assistance Stations are also proposed for closure (-1.7 million). The Animal Damage Control (ADC) program is budgeted at $13.4 million -- a reduction of $1.7 million from the 1982 level--resulting from the closure of three ADC field stations.

Land and Water Conservation Fund

The 1983 Budget requests $174 million from the Land and Water Conservation Fund (LWCF). The following table details the 1982 amounts and 1983 requests from the Land and Water Conservation Fund both for land acquisition and for the Park Restoration and Improvement Program:

Appropriations from the Land and Water Conservation Fund

Comparison of 1982 Appropriation and 1983 Request

($ millions)

	1982	1983	Difference
Federal land acquisition:			
Bureau of Land Management	3.0	.5	-2.5
Fish and Wildlife Service	16.5	1.6	-14.9
National Park Service	103.5	59.8	-43.7
Forest Service	26.3	7.6	-18.7
Subtotal, Fed. land acquisition	149.3	69.5	-79.8
Park Restoration and Improvement Program:			
Operation of the National Park System	---	42.0	+42.0
Construction	---	63.0	+63.0
Subtotal, PRIP	---	105.0	+105.0
TOTAL, LAND AND WATER CONSERVATION FUND	149.3	174.5	+25.2

- Land Acquisition. The Administration has requested a total 1983 appropriation of $69 million from the LWCF for land acquisition activities of the Bureau of Land Management, the Fish and Wildlife Service, the National Park Service and the Forest Service. Consistent with 1982 Congressional action, separate funding is proposed in each agency's budget rather than as a single appropriation. The $60 million requested for Park Service land acquisition in 1983 will be used to pay court awards on lands already taken or condemned by the United States and for emergency purchases. Also, the Forest Service, the Fish and Wildlife Service, and the Bureau of Land Management will continue to acquire some high-priority conservation areas.

- Contract Authority. Elimination of LWCF Contract Authority - Section 9 of Public Law 88-578 provides that $30 million in contract authority shall become available each year from the Land and Water Conservation Fund for federal land acquisition. This authority has not been used for many years because the Department uses established reprogramming procedures to meet unforeseen needs that arise during the year. Apropriation language is proposed in the 1983 Budget to repeal Section 9.

WATER RESOURCES

Water Project Construction

The 1983 budget request for the Bureau of Reclamation includes $666.6 million for its construction program, an increase of $118.1 million over 1982—an approximate 22% increase. The 1983 program will continue construction on 70 projects and begin preconstruction planning on two projects. Major construction programs include:

	($ millions)
Central Arizona Project	161
Central Utah Project	90
Central Valley Project	60
Chief Joseph Dam Project	17
Colorado River Basin Salinity Control Projects	61
Columbia Basin Project	50
Dallas Creek Project	39
Dolores Project	46
Fryingpan-Arkansas Project	13
McGee Creek Project	53
North Loup Division	39

The 1983 President's Budget is the first one in three years to include funds to initiate construction of new water resources projects. A budget amendment will be proposed for a new construction start, as yet unidentified, but one which meets the Administration's criteria for non-Federal financing and cost-sharing and which is economically and financially sound. Other items of interest in the 1983 program are:

- Advance Planning. For the first time, $2 million for advance planning for construction has been included in the General Investigations program to permit completion of preauthorization activities prior to Congressional authorization for construction. This procedure will greatly shorten the lead time in the planning process prior to initiating construction on new projects.
- Dam Safety. The Bureau of Reclamation is requesting $25.8 million to continue work on the Safety of Dams Program. Activities will include work on 11 dams and several studies. Rehabilitation and betterment work will continue on 14 projects and will be initiated on 4 projects. The Rehabilitation and Betterment Program, with requested funding of $26.6 million, enables water users to conserve energy and water and reduce operation and maintenance expenses.

Geological Survey

- Ground Water Contamination. The 1983 Budget of $4.4 million includes a $3.5 million increase for expanding the program initiated in 1982 to determine the processes that reduce or remove contamination in ground water and to develop information important to improving guidelines for the selection, design and operation of waste disposal sites.
- Acid Rain. A $1.5 million program initiated in 1982 to study the effects of acid rain on land and water resources will be expanded by $1.0 million for additional research and monitoring.

SURFACE MINING RECLAMATION AND ENFORCEMENT

The FY 1983 budget request for the Office of Surface Mining Reclamation and Enforcement (OSM) projects that all but three coal-producing states will have taken over the primary responsibility for regulating coal mining operations within their boundaries by the beginning of FY 1983. It is also anticipated that two additional states will assume this responsibility in FY 1983, leaving Georgia as the only state that will have a direct Federal program, reflecting that State's decision not to have a State program. The total request for regulation and reclamation is $159.8 million in FY 1983, a decrease of approximately $.8 million from FY 1982.

Surface Mining Reclamation and Enforcement

($ millions)

	1982	1983	Change
Regulation			
State Regulatory Grants	24.4	33.4	+ 9.0
Program Operations and Inspection	20.7	9.4	-11.3
Technital Support	4.9	9.8	+ 4.9
General Administration	8.5	9.6	+ 1.1
Total, Regulation	58.5	62.2	+ 3.7
Reclamation			
State Reclamation Grants	59.1	78.5	+19.4
Reclamation Fund Management	4.7	4.9	+ 0.2
Interior Reclamation Projects	28.1	9.4	-18.7
Rural Abandoned Mine Program	5.1	3.6	- 1.5
Technical Support	1.1	1.2	+ 0.1
General Administration	4.0	--	- 4.0
Total, Reclamation	102.1	97.6	- 4.5

Regulatory Programs

OSM is requesting a total of $62.2 million to conduct its regulatory activities in FY 1983. The net change between FY 1982 and FY 1983, an increase of $3.7 million, does not fully convey the significant changes in program direction proposed for the coming fiscal year.

- State Grants. First, and most important, is the significant increase (more than one-third over 1982 levels) in the amount of grant money provided to states to assist them with their efforts in assuming primary responsibility for coal mining operations within their borders. This change is consistent with the Administration's overall effort to reduce the level of Federal involvement in matters that can be better handled by levels of government closer to the actual problems.

- Operations and Enforcement. The restructuring of Federal regulatory programs and the significant reductions in the amount of funding available to those activities reflects the Administration's efforts to redefine the Federal role in this area. Last year's program activity components--State and Federal Programs, and Federal Inspection and Enforcement--which signified a more direct Federal involvement, have been consolidated and restructured into a new activity, Program Operations and Enforcement. This will place more emphasis on assistance and oversight of State efforts to assume primary responsibility for regulation and enforcement. The Mine Plan Review component will be moved from the State and Federal Programs activity to Technical Support, which is more in keeping with the reorientation of OSM's efforts.

Mined Land Reclamation Programs

A total of $97.6 million is requested for OSM's reclamation programs, a decrease of $4.5 million from last year's funding for these activities. However, a major change in this area is the nearly $20 million in increased funds that will be made directly available to the states to carry out reclamation work. This is an increase of one-third over last year's funding levels. There will be an offsetting reduction of $18.7 million in the funding requested for direct Federal reclamation work. Federal efforts ($9.4 million) will be limited to funding emergency projects.

INDIAN, TERRITORIAL, AND INTERNATIONAL AFFAIRS

Bureau of Indian Affairs

In 1983, the Bureau of Indian Affairs is proposing three new initiatives. One would provide "seed money" to encourage economic development on reservations; the second would assist small tribes in acquiring management expertise so that they can manage Federally funded programs; and the third would reduce overhead and unnecessary organizational layering.

- Economic Development Initiative. This $10 million request would assist tribes and individual entrepreneurs to establish profit-making enterprises. The funds would be used as "seed money" (not more than 20% of the needed capital would come from this source) to attract private capital, to reduce institutional, procedural, regulatory and other barriers to economic development on reservations, and to stimulate and coordinate interest in economic development. This initiative will provide an opportunity for tribes which control considerable amounts of economically attractive natural resources to develop those resources and sustain economic activity on reservations.

- Small Tribes Initiative. The $5 million requested for this initiative would assist small tribes (1,500 or fewer members) to develop the management capability to operate federally-funded programs. Because these tribes are small, they often lack the management capability (property management, bookkeeping, budgeting) to manage these programs effectively. This initiative would allow these tribes to employ consultants or other experts to improve their management capabilities.

- Administrative Efficiency. As more tribes take advantage of self-determination and begin managing federally-funded programs, the Bureau of Indian Affairs can reduce its administrative and program management overhead. Therefore, the Department is proposing a $16 million reduction in such overhead for fiscal year 1983. Reductions will be made in administrative and program management costs throughout the Bureau of Indian Affairs by improving efficiency and eliminating overlapping activities without disrupting direct services to the tribes.

Territorial Programs

The 1983 budget request for annual and permanent appropriations for territorial programs totals $187.8 million, a decrease of $29.6 million from the comparable 1982 level, excluding 1982 proposed supplementals. This decrease stems partly from the final funding increment of $21.5 million in 1982 for completion of a major hospital construction project in the Virgin Islands. It also represents one-time construction projects and a special operations and maintenance program funded in 1982.

The Trust Territory of the Pacific Islands is still a major concern in the 1983 Budget as negotiations continue toward developing a relationship of free association between the United States and the three new governments of Micronesia (the Republic of Palau, the Federated States of Micronesia, and the Government of the Marshall Islands).

- Territorial Government Operations. The operating budgets for the territorial governments have been increased slightly over the 1982 levels.

- Capital Relocation. The second phase of funding (7,800) is provided for the re-establishment of the Trust Territory capital from Saipan to the new capitals of the three entities. Planning and design funds were provided in 1982.

- Resettlement of Bikini Islanders. A 1982 supplemental appropriation of $21.0 million is being requested to provide for the permanent relocation and resettlement on Kili and Ejit Islands of the displaced Bikini Islanders . This proposal will construct permanent housing and community facilities and replant coconut and other food crops.

PAYMENTS TO STATE AND LOCAL GOVERNMENTS

The proposed 1983 Budget includes $1.1 billion for grant and direct payment programs to State and local govenmental units, an increase of $88.6 million, or about 8 percent, over 1982. These amounts include funding for the Mined Area Reclamation grant programs and direct payments by the Bureau of Land Management to State and local governments of $756.5 million. This payment will be derived entirely from shared receipts from public lands activities such as timber sales, mineral leasing, and grazing fees. Typically, 50 percent of the Federal receipts for such activities are returned to State and local governments. These amounts have been increasing rapidly in conjunction with energy and other price increases and leasing activity, rising from $289.0 million in 1978 to $593.7 million in 1982 and projected to increase by an additional $163.8 million to $756.5 million in 1983. A total of $45 million is included for payments in lieu of taxes (PILT) for Federal lands administered by the Bureau of Land Management, Forest Service, National Park Service, and Fish and Wildlife Service under proposed legislation for later transmittal.

A table of Interior grant programs and payments primarily earmarked for State and local governments follows.

Grants and Payments
To State and Local Governments

	(Dollar amounts in millions)		
	1982	1983	Change
Bureau of Land Management			
Shared Receipts from Mineral and Timber Sales, Grazing Fees, and Other Receipts	593.7	756.5	+162.8
Payments in Lieu of Taxes	95.5	45.0	- 50.5
Office of Water Research and Technology			
Basic Grants to Water Research Institutes	6.0*	—	-6.0
Fish and Wildlife Service			
Federal Aid to Fish and Wildlife Restoration	144.9	158.2	+13.3
National Wildlife Refuge Fund	9.8	4.1	-5.7
National Park Service			
Urban Park and Recreation Fund Grants	7.7	—	-7.7
Historic Preservation Fund Grants (State Portion)	21.9	—	-21.9
Office of Surface Mining			
State Regulatory Program Grants	24.4	33.4	+9.0
State Reclamation Grants	59.1	78.5	+19.4
Bureau of Mines			
Grants to Mineral Institutes	9.2	—	-9.2
Bureau of Indian Affairs			
Johnson O'Malley Grants to Schools	26.0	26.0	—
Department of Education Grants to Schools	50.4 **	35.5	-14.9
TOTAL	1,048.6	1,137.2	+88.6

* Includes $2.7 million deferred from FY 1981.

** Includes FY 1982 proposed rescission.

MINERAL INFORMATION AND RESEARCH

The 1983 budget reflects a substantial restructuring of the Department of the Interior's mineral information and research programs. Proposed funding levels will result in increased emphasis on strategic and critical minerals and implement the Administration's policy of focusing research and development on high-risk projects with long-term payoff.

- Strategic and Critical Minerals Research. Funding for this Bureau of Mines program is increased by $2.6 million over 1982 for additional research on recovering such strategic and critical minerals as chromium, nickle, tungsten, and cobalt. In addition, an initiative begun in FY 1982 of redirecting its mineral research efforts within existing funding levels will continue. Nearly $5 million of the base funding for the Mineral Resources Technology program will be shifted into research projects involving strategic and critical minerals. A separate increase of $1.3 million is requested for the Geological Survey's Mineral Resource Surveys for an accelerated program of geologic research to assist in the identification and delineation of new deposits of these minerals.

- Other Minerals Research and Development. The 1983 budget is being reduced by $8.2 million to reflect the Administration's policy to focus Federally-funded R&D on high risk projects with long-term payoff. There will be an incremental shift in research emphasis from safety problems to engineering-related health problems such as respirable dust. A reduction of $4.2 million in the Minerals Environmental Technology program is also scheduled.

- Wilderness Minerals Surveys. Bureau of Mines funding will be reduced by $4.0 million as wilderness mineral surveys in support of the Forest Service's RARE II studies are completed. Funding for the Geological Survey's portion of these mineral surveys will continue at current levels in 1983 to allow the completion of all required work.

  Funding for mineral surveys in wilderness study areas administered by the Bureau of Land Management is also being reduced. This is a result of a decision to conduct such surveys only on areas determined potentially suitable for recommendation as wilderness.

- Mineral Institutes Program. No funding is provided in 1983 for the Mineral Institutes program, which was transferred from the Office of Surface Mining to the Bureau of Mines in January 1982.

REORGANIZATION OF INDIAN EDUCATION FUNCTIONS

(Department of Education)

Legislation is proposed to transfer authority for the Indian Education Assistance and Impact Aid for School Construction programs from the Department of Education to the Department of the Interior in FY 1983.

	Budget Authority ($ in millions)	
	FY 1982 1/	FY 1983
Indian Education Assistance..........................	71.6	51.1
Impact Aid: School Construction....................	9.0	.8
Total, Transfers from Department of Education..	80.6	51.9

1/ 1982 amount, adjusted for proposed rescission of $6,255,000, is shown for comparative purposes.

REORGANIZATION OF ENERGY FUNCTIONS

(Department of Energy)

As part of the President's proposed plan for the Department of Energy, the Department of the Interior would be given management responsibility for the Naval Petroleum and Oil Shale Reserves, the Strategic Petroleum Reserve, and the five Power Marketing Administrations. The budget request for these programs totals $1,188 million for FY 1983.

	Budget Authority ($ in millions)	
	FY 1982 1/	FY 1983
Naval Petroleum and Oil Shale Reserves..............	$ 213.1	$ 232.5
Power Marketing Administrations.....................	523.1	711.6
Strategic Petroleum Reserve.........................	191.4	242.1
Strategic Petroleum Reserve, Off-budget.............	(3,684.0)	(2,074.1)
Program Administration..............................	2.4	1.8
Total, Transfers to Interior...................	$ 930.0	$1,188.1

1/ 1982 amounts shown for comparative purposes.

OTHER BUREAU HIGHLIGHTS

Comparison of FY 1982-1983 Budget Authority

(Dollar Amounts in Millions)

Bureau or Office	1982 1/	1983	Change
Bureau of Land Management	1,139	1,256	+117
Office of Water Research and Technology	11	—	-11
Fish and Wildlife Service	420	416	-4
National Park Service	753	736	-17
Geological Survey	497	518	+21
Office of Surface Mining Reclamation and Enforcement	161	160	-1
Bureau of Mines	151	125	-26
Bureau of Indian Affairs	1,592	1,652	+60
Office of Territorial and International Affairs	242	188	-54
Office of the Solicitor	18	19	+1
Office of the Secretary	58	56	-2
Bureau of Reclamation	771	950	+179
Total, Department of the Interior	5,813	6,076	+263

1/ FY 1982 Budget Authority excludes $71 million for proposed FY 1982 fire suppression supplementals and $30 million in Contract Authority - Land and Water Conservation Fund.

Other 1983 programs of interest are discussed below by bureau.

Bureau of Land Management. The 1983 Budget for BLM emphasizes the continued acceleration and streamlining of both OCS and onshore energy resources on the public lands. Increases in the budget are provided for a number of energy and other BLM activities, including, for example, the energy and non-energy realty programs, mineral material sales, mining law administration, cadastral surveys, and fire and data management. A small increase is also proposed for the Oregon and California Grants Lands. As a result of policies designed to strengthen and make more efficient the management of the public lands, cost-saving reductions are proposed for a number of programs, for example, coal leasing, withdrawal processing and review, rangeland management, wilderness review, and planning. Decreases in the budget are also proposed for BLM's Construction, Access, and Land Acquisition programs and for Payments In Lieu of Taxes.

Office of Water Research and Technology. The 1983 Budget does not include a funding request for the Office of Water Research and Technology (OWRT) and proposes the termination of the Office by the end of 1982. OWRT has been administering programs in water resources research, development, demonstration, technology transfer and information dissemination. The two reimbursable programs, which provide assistance and expertise in the development of desalination projects in Israel and Saudi Arabia, will be administered by the Bureau of Reclamation beginning in 1983. Administration of Water Resources Scientific Information Center activities will be transferred to the Geological Survey.

Fish and Wildlife Service. The 1983 Budget for the Habitat Preservation Program is $31.1 million--a reduction of $6.6 million from the 1982 estimate. The principle reduction is the termination of the Cooperative Research Unit Program (-$4.4 million). The other reductions include coal operation, systems and inventory, minerals, and environmental contaminants research (-$2.2 million).

The Endangered Species Program is budgeted at $16.6 million--a reduction in the protection area of $1 million from the 1982 estimate. The Budget does not request an advance under the Migratory Bird Conservation program. The land acquisition budget reflects a $14.9 million reduction from the $16.5 million level enacted in 1982. An appropriation for direct payments to counties under the National Wildlife Refuge Fund has not been requested because the Department is proposing legislative changes in the Payments in Lieu of Taxes program which would eliminate the need for a direct appropriation for that purpose (-$5,760). The other reductions in the FWS Budget are the result of planned administrative and program efficiencies.

National Park Service. The 1983 request for the Operation of the National Park System account is $539.7 million, an increase of $26.8 million over the 1982 appropriation to date. The increase is directed almost exclusively toward restoring some of the park programs curtailed in the past due to a combination of inflationary pressures, tight budgetary constraints and an expanding National Park System. Major components of the increase include the restoration of routine maintenance activities and funding to cover the increased cost of supplies and materials and contractual services (+15.2 million); funding to improve and restore visitor service activities and programs (+6.3 million); and additional funding to expand research, monitoring and management programs for the protection and preservation of park natural and cultural resources (+4.5 million). The increases are offset by reductions in performing arts activities, the operation of visitor transportation systems, and the deferral of low-priority maintenance projects.

Geological Survey. Program increases are being requested in the Surveys, Investigations and Research appropriation to expand the map revision program, increase geologic mapping in selected areas, conduct mineral appraisals in Alaska and the contiguous States, provide information in support of the Federal coal program, and for the assessment of offshore oil and gas resources, improve the national hydrologic data network, and conduct additional water quality studies under the Federal/State cooperative program. These increases are offset by decreases reflecting a reduced emphasis on government-funded research on certain energy resources, the transfer of Landsat funding to the National Oceanic and Atmospheric Administration and cutbacks in lower-priority programs. Legislation is being proposed to establish a new appropriation and revolving fund to be utilized in conducting the Digital Cartography program. Additional funds (+$4.2 million) and a new appropriation are being requested to fund the operation and maintenance of the Barrow gas fields.

Bureau of Mines. The major change in the Bureau's budget is the $25.9 million decrease from the FY 1982 level of $151.4 million. The decision not to fund Mineral Institutes in FY 1983, and the lack of any requirements for construction funds comprise more than half ($13.7 million) of the total reductions. The remaining decreases result primarily from diminished requirements for mineral assessments, and from net decreases totaling $9.7 million in the Bureau's research program. These decreases reflect the Department's efforts to restrict Federally-funded R & D to long-term-benefit high-risk projects that are unlikely to be funded by private industry. One major initiative that will receive increased funding (+2.6 million) within the Bureau's research program is the research to promote improved recovery and conservation of critical and strategic materials such as chromium, cobalt, nickel, and tungsten. Funding for minerals data collection and analysis remains essentially unchanged.

Bureau of Indian Affairs. The 1983 Budget request for the Bureau of Indian Affairs is $60 million over the FY 1982 level of $1,592 million. This total includes increases of $47 million for operating program such as education, welfare assistance, housing, natural resources development, etc.; $12 million for construction and $33 million for permanent and trust funds, and decreases of $28 million for education programs proposed for transfer from the Department of Education and $4 million for road construction.

Bureau of Reclamation The proposed budget provides for increases in Reclamation's five major programs - Construction Program, Operations and Maintenance, Loan Program, General Investigations, and General Administrative Expenses. Work will continue on the ongoing construction projects in order that the priority benefits can be completed in a timely manner. However, there are several projects in the Construction Program in a hold status because of major problems, such as international issues on the Garrison Diversion Unit, environmental issues on Auburn Dam, and legal issues on the O'Neill Unit. Because of these issues, the funding request for such projects has been significantly reduced and, in general, only allows for required studies, handling of legal issues, and protection of existing facilities.

Included in Reclamation's Construction Program are the two international reimbursable programs, which have been administered by the Office of Water Research and Technology. The purpose of this work is to provide assistance and expertise in the development of desalinization projects in Israel and Saudi Arabia. All costs for these activities are fully reimbursed.

The $140.9 million request for the Operations and Maintenance Program, an increase of $22.3 million over 1982, will allow for work deferred in 1982 and earlier to be reinstated and O&M activities will continue on 32 projects. Work will also continue on associated O&M activities such as examination of existing structures, soil and moisture conservation, management of public lands under the Bureau's jurisdiction, and similar activities.

The Loan Program request of $39.6 million is $17 million higher than 1982 appropriations. This funding level will keep all 10 ongoing projects on schedule.

The General Investigations Program provides for 58 investigations. Such studies may lead to proposals for the construction of new projects or for better water conservation and management on existing projects. Funds for advance planning, $2 million, have been included to provide for detailed studies to refine data in feasibility reports and develop definite plans for construction of proposed projects. This appropriation also includes work in the areas of atmospheric water resources and general engineering and planning research. The total request for 1983 is $36.5 million, an increase of $5.9 million over 1982.

The $9.4 million increase for General Administrative Expenses will provide for the increased cost of office space, supplies, materials, contractual services, and for the first phase of replacing the central computer system. Total funds requested for these activities is $49.3 million.

A $1 million request is made for the Emergency Fund since all funds have been utilized to repair the San Luis Dam slide damage and fire repair work at the Grand Coulee Dam. This is the first appropriation request for this fund since fiscal year 1977.

FY 1982 SUPPLEMENTAL APPROPRIATION REQUESTS

Program Supplementals

(Dollar amounts in thousands)

Bureau/Appropriation	FTE/T	Amount Requested
BUREAU OF LAND MANAGEMENT		
Management of Land and Resources		
Fire suppression	—	60,000
FISH AND WILDLIFE SERVICE		
Resource Management		
Fire suppression	—	1,800
NATIONAL PARK SERVICE		
Operation of the National Park System		
Fire suppression	—	2,200
BUREAU OF MINES		
Mines and Minerals		
Construction of new facility - Bruceton, Pa.	—	4,073
BUREAU OF INDIAN AFFAIRS		
Operation of Indian Programs		
Fire suppression	—	7,000
TERRITORIAL AND INTERNATIONAL AFFAIRS		
Administration of Territories		
Northern Marianas inflation adjustment	—	3,402
Trust Territory of the Pacific Islands		
Bikini Resettlement	—	21,000
Total, 1982 Supplemental Requests		99,475

FY 1982 TRANSFERS

		FTE/T	Amount
From:	OFFICE OF THE SECRETARY, Departmental Management	-19	-644
To:	BUREAU OF MINES, Mines and Minerals	+19	+644

Reflects transfer of the Office of Minerals Policy and Research Analysis functions.

		FTE/T	Amount
From:	OFFICE OF THE SECRETARY, Office of Inspector General	-3	-120
To:	OFFICE OF THE SECRETARY, Departmental Management	+3	+120

Reflects transfer of Ethics function.

AUTHORIZING AND TRANSFER LEGISLATION REQUIRED FOR FY 1983

(Dollar amounts in thousands)

		Existing Authorization	Expiration Date	Amount Requested in Budget
I.	Continuing Programs:			
	BUREAU OF LAND MANAGEMENT			
	Management of Lands and Resources (except Firefighting)	P.L. 95-352	9/30/82	368,777
	Withdrawal Processing	P.L. 94-579	Until Exp.	248
	Withdrawal Review ($10,000)	P.L. 94-579	Until Exp.	3,500
	Construction, Access and Land Acquisition	P.L. 95-352	9/30/82	2,711
	Payments in Lieu of Taxes 1/	P.L. 95-352	9/30/82	45,000
	FISH AND WILDLIFE SERVICE			
	Endangered Species Act	P.L. 93-205	9/30/82	16,550
	BUREAU OF INDIAN AFFAIRS			
	Construction, Ak-Chin Project 1/	P.L. 95-328	None	29,800
	NATIONAL PARK SERVICE			
	John F. Kennedy Center for the Performing Arts	P.L. 97-63	9/30/82	4,212
II.	New Program Authority:			
	GEOLOGICAL SURVEY			
	Digital Cartography Revolving Fund	None	--	3,873
	TERRITORIAL AND INTERNATIONAL AFFAIRS			
	Administration of Territories			
	Guam construction	None	--	3,165
	American Samoa loan guarantee authority	None	--	(8,000) 2/
III.	Proposed Transfers:			
	BUREAU OF INDIAN AFFAIRS			
	Indian Education Assistance	Transfer from DOEd		51,119
	Impact Aid: School Construction Affecting Indian Lands	Transfer from DOEd		838
	ENERGY PROGRAMS			
	Naval Petroleum and Oil Shale Reserves	Transfer from DOE		232,560
	Power Marketing Administrations	Transfer from DOE		711,647
	Strategic Petroleum Reserve	Transfer from DOE		242,118
	Strategic Petroleum Reserve, Off-budget	Transfer from DOE		(2,374,060)

1/ Proposed for later transmittal.
2/ Requirement for loan guarantee authority only, no budget authority requested.

TABLE 1

Comparison of 1983 Estimate with 1982 Estimate

Full-Time Equivalent Employment and Budget Authority

(Dollar amounts in thousands)

Bureau/Appropriation	1982 Estimate		1983 Estimate		Change from 1982	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
I. INTERIOR PROGRAMS						
A. Interior and Related Agencies						
BUREAU OF LAND MANAGEMENT						
Appropriations:						
Management of Lands and Resources	8,618	355,326	8,693	373,527	+ 75	+ 18,201
Acquisition, Construction & Maintenance	303	12,211	—	—	- 303	- 12,211
Land Acquisition	5	3,012	—	—	- 5	- 3,012
Construction, Access & Land Acquisition	—	—	49	2,711	+ 49	+ 2,711
Payments in Lieu of Taxes	5	95,320	5	65,000[1]	—	- 30,320
Oregon & California Grant Lands	1,110	52,788	1,060	52,883	- 50	+ 95
Service Charges, Deposits & Forfeitures	114	9,600	114	10,000	—	+ 400
Range Improvements	223	13,226	187	11,048	- 36	- 2,178
Miscellaneous Trust Funds (Current)	—	100	—	100	—	—
Subtotal, Appropriations	10,378	541,783	10,108	495,269	- 270	- 46,514
Proposed 1982 Supplemental:						
Fire Suppression	—	60,000	—	—	—	- 60,000
Permanents and Trusts:						
Miscellaneous Permanent Appropriations	—	596,699	—	760,461	—	+163,762
Miscellaneous Trust Funds	19	600	19	600	—	—
Subtotal, Permanents and Trusts	19	597,299	19	761,061	—	+163,762
Other Accounts:						
Working Capital Fund	18	—	18	—	—	—
Reimbursements	166	—	166	—	—	—
Allocation Accounts Other Agencies	67	—	57	—	- 10	—
TOTAL, BUREAU OF LAND MANAGEMENT	10,648	1,199,082	10,368	1,256,330	- 280	+ 57,248
OFFICE OF WATER RESEARCH & TECHNOLOGY						
Appropriations:						
Salaries and expenses	31	10,636	—	—	- 31	- 10,636
Deferred from FY 1981	—	(2,745)				
Other (reimbursements)	(11)	(825)	(—)[2]	(—)[2]	(—)[2]	(—)[2]
TOTAL, OFFICE OF WATER RES. & TECHNOLOGY	31	10,636	—	—	-31	- 10,636
U.S. FISH AND WILDLIFE SERVICE						
Appropriations:						
Resource Management	5,929	220,350	5,430	218,922	- 499	- 1,428
Construction	147	6,683	147	12,705	—	+ 6,022
Land Acquisition	10	16,491	10	1,567	—	- 14,924
Migratory Bird Conservation Account - Advance	—	1,200	—	—	—	- 1,200
National Wildlife Refuge Fund - Payments in Lieu of Taxes	—	5,760	—	—	—	- 5,760
Subtotal, Appropriations	6,086	250,484	5,587	233,194	- 499	- 17,290

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[1] Proposed for later transmittal, proposed legislation.

[2] Reported in the budget highlights of the Bureau of Reclamation.

(Dollar amounts in thousands)

Bureau/Appropriation	1982 Estimate FTE/T	1982 Estimate Amount	1983 Estimate FTE/T	1983 Estimate Amount	Change from 1982 FTE/T	Change from 1982 Amount
U.S. FISH AND WILDLIFE SERVICE (Cont'd)						
Proposed 1982 Supplemental:						
Fire suppression	—	1,800	—	—	—	- 1,800
Permanents and Trusts:						
Federal Aid in Fish Restoration	27	36,881	27	40,230	—	+ 3,349
Federal Aid in Wildlife Restoration	60	108,019	60	118,000	—	+ 9,981
National Wildlife Refuge Fund	26	4,053	26	4,053	—	—
Migratory Bird Conservation Account	153	16,376	153	16,376	—	—
Proceeds from Sales	1	500	1	500	—	—
Contributed Funds	86	3,442	86	3,750	—	+ 308
Advances and Reimbursements	621	—	576	—	- 45	—
Subtotal, Permanents and Trusts	974	169,271	929	182,909	- 45	+ 13,638
TOTAL, U.S. FISH AND WILDLIFE SERVICE	7,060	421,555	6,516	416,103	- 544	- 5,452
NATIONAL PARK SERVICE						
Appropriations:						
Operation of the National Park System	15,254	512,882	15,011	539,703	- 243	+ 26,821
National Recreation & Preservation	337	12,372	193	6,987	-144	- 5,385
Construction	698	85,172	698	123,721	—	+ 38,549
John F. Kennedy Center for the Performing Arts	106	4,142	101	3,986	- 5	- 156
Urban Park and Recreation Fund	—	7,680	22	—	+ 22	- 7,680
Land Acquisition	284	103,462	190	59,776	- 94	- 43,686
Historic Preservation Fund	—	25,440	24	—	+ 24	- 25,440
Subtotal, Appropriations	16,679	751,150	16,239	734,173	- 440	- 16,977
Proposed 1982 Supplemental:						
Fire suppression	—	2,200	—	—	—	- 2,200
Permanents and Trusts:						
Miscellaneous Permanent	2	405	2	405	—	—
Miscellaneous Trust Funds	21	1,764	21	1,700	—	- 64
Subtotal, Permanents and Trust	23	2,169	23	2,105	—	- 64
Other (Transfers and Reimbursables)	537	—	536	—	- 1	—
Permanent Contract Authority						
Land and Water Conservation Fund	—	30,000	—	— 3/	—	- 30,000
TOTAL, NATIONAL PARK SERVICE	17,239	785,519	16,798	736,278	- 441	- 49,241
U.S. GEOLOGICAL SURVEY						
Appropriations:						
Surveys, investigations, & research	10,822	494,545	10,304	507,577	- 518	+ 13,032
Exploration of National Petroleum Reserve in Alaska	15	2,196	—	—	- 15	- 2,196
Barrow Area Gas-Operation Exploration and Development	—	—	15	6,400	+ 15	+ 6,400
Subtotal, Appropriations	10,837	496,741	10,319	513,977	- 518	+ 17,236
Legislative Program:						
Digital Cartography	—	—	92	3,873	+ 92	+ 3,873
Reimbursements	2,289	—	2,205	—	- 84	—
TOTAL, U.S. GEOLOGICAL SURVEY	13,126	496,741	12,616	517,850	- 510	+ 21,109

3/ Appropriation language is proposed to eliminate the Land and Water Conservation Fund - Contract Authority.

(Dollar amounts in thousands)

Bureau/Appropriation	1982 Estimate FTE/T	1982 Estimate Amount	1983 Estimate FTE/T	1983 Estimate Amount	Change from 1982 FTE/T	Change from 1982 Amount
BUREAU OF MINES						
Appropriation:						
Mines and Minerals	2,529	145,885	2,272	124,676	- 257	- 21,209
Transfer:						
Mines and Minerals	19	644	(19)	(644)	- 19	- 644
Proposed 1982 Supplemental:						
Construction and Rehabilitation	—	4,073	—	—	—	- 4,073
Trust Funds and Miscellaneous Accounts:						
Contributed Funds	23	800	23	800	—	—
Miscellaneous Accounts	430	—	429	—	- 1	—
Subtotal, Trust Funds & Miscellaneous	453	800	452	800	- 1	—
TOTAL, BUREAU OF MINES	3,001	151,402	2,726	125,476	- 277	- 25,926
OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT						
Appropriation:						
Regulation and Technology	566	58,515	525	62,173	- 41	+ 3,658
Abandoned Mine Reclamation Fund	328	102,082	262	97,649	- 66	- 4,433
TOTAL, OFFICE OF SURFACE MINING	894	160,597	787	159,822	- 107	- 775
BUREAU OF INDIAN AFFAIRS						
Appropriations:						
Operation of Indian Programs	15,256	802,220	14,470	849,250	- 786	+ 47,030
Indian Education Assistance	68	77,852	68	51,119	—	- 26,733
Proposed rescission 4/	—	-6,255	—	—	—	+ 6,255
Construction	90	93,628	87	106,000 5/	- 3	+ 12,372
Impact Aid: School Construction Affecting Indian Land 4/	22	9,000	21	838	- 1	- 8,162
Road Construction	665	47,160	665	43,585	—	- 3,575
Eastern Indian Land Claims Fund	—	—	—	—	—	—
Subtotal, Appropriations	16,101	1,023,605	15,311	1,050,792	- 790	+ 27,187
Proposed 1982 Supplemental:						
Fire suppression	—	7,000	—	—	—	- 7,000
Permanents and Trusts:						
Miscellaneous Permanent Appropriations	511	30,000	511	30,000	—	—
Miscellaneous Trust Funds	97	538,400	23	571,200	- 74	+ 32,800
Subtotal, Permanents and Trusts	608	568,400	534	601,200	- 74	+ 32,800
TOTAL, BUREAU OF INDIAN AFFAIRS	16,709	1,599,205	15,845	1,651,992	- 864	+ 52,787
OFFICE OF TERRITORIAL AND INTERNATIONAL AFFAIRS						
Appropriations:						
Trust Territory of the Pacific Islands	30	76,157	30	75,500	—	- 657
Administration of Territories	104	86,990	110	58,076	+ 6	- 28,914
Subtotal, Appropriations	134	163,147	140	133,576	+ 6	- 29,571

4/ Transfer proposed from the Department of Education in FY 1983. FY 1982 figures are displayed for comparative purposes.

5/ Includes $29,800 (Ak Chin Irrigation Project) proposed for later transmittal, proposed legislation.

(Dollar Amounts in thousands)

Bureau/Appropriation	1982 Estimate		1983 Estimate		Change from 1982	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
OFFICE OF TERRITORIAL AND INTERNATIONAL AFFAIRS (Cont'd)						
Proposed 1982 Supplementals:						
TTPI (Bikini Support)	--	21,000	--	(500)	--	- 21,000
Admin. (Northern Mariana Islands Inflation Adjustment)	--	3,402	--	(N/A)	--	- 3,402
Subtotal, 1982 Proposed Supplementals	--	24,402	--	(500)	--	- 24,402
Permanents and Trusts:						
Payments to U.S. Territories, Fiscal Assistance	--	54,200	--	54,200	--	--
Subtotal, Permanents and Trusts	--	54,200	--	54,200	--	--
TOTAL, TERRITORIAL & INTERNATIONAL AFFAIRS	134	241,749	140	187,776	+ 6	- 53,973
OFFICE OF THE SOLICITOR						
Appropriation:						
Salaries and Expenses	380	17,600	376	19,071	- 4	+ 1,471
OFFICE OF THE SECRETARY						
Appropriations:						
Departmental Management	785	40,737	746	44,157	- 39	+ 3,420
Construction Management	18	3,840	18	--	--	- 3,840
Inspector General	220	10,339	238	11,400	+ 18	+ 1,061
Youth Conservation Corps	--	4,200 6/	--	--	--	- 4,200
Subtotal, Appropriations	1,023	59,116	1,002	55,557	- 21	- 3,559
Transfers:						
Departmental Management	-16	-524	--	--	+ 16	+ 524
Inspector General	- 3	-120	--	--	+ 3	+ 120
Subtotal	-19	-644	--	--	+ 19	+ 644
Other Accounts:						
Working Capital Fund	316	--	330	--	+ 14	--
Youth Programs	108	--	77	--	- 31	--
Advances and Reimbursements	4	--	4	--	--	--
Subtotal, Other Accounts	428	--	411	--	- 17	--
TOTAL, OFFICE OF THE SECRETARY	1,432	58,472	1,413	55,557	- 19	- 2,915
Total, Interior and Related Agencies	70,654	5,142,358	67,583	5,126,255	-3,071	- 16,103
(Annual Appropriations)	(65,198)	(3,803,219)	(62,308)	(3,576,980)	(-2,890)	(-226,239)
(Other Accounts)	(5,456)	(1,339,139)	(5,275)	(1,549,275)	(-181)	(+210,136)
B. Energy and Water Development						
BUREAU OF RECLAMATION						
Appropriations:						
Loan Program	22	22,614	20	39,600	- 2	+ 16,986
Construction Program	4,260	548,505	4,164	666,585	- 96	+118,080
General Investigations	566	30,596	544	36,485	- 22	+ 5,889
Emergency Fund	--	--	--	1,000	--	+ 1,000
Operation and Maintenance	2,549	118,518	2,463	140,850	- 86	+ 22,332
General Administrative Expenses	925	39,928	988	49,300	- 37	+ 9,372
Subtotal, Appropriations	8,322	760,161	8,079	933,820	- 243	+173,659

6/ These are funds available for obligation under the Continuing Resolution.

(Dollar amounts in thousands)

Bureau/Appropriation	1982 Estimate FTE/T	1982 Estimate Amount	1983 Estimate FTE/T	1983 Estimate Amount	Change from 1982 FTE/T	Change from 1982 Amount
BUREAU OF RECLAMATION (Cont'd)						
Permanents, Trusts & Allocation Accounts:						
Miscellaneous Permanents	--	2,700	--	2,700	--	--
Reclamation Trust Funds	28	8,352	27	13,800	- 1	+ 5,448
Allocations from Job Corps and Bureau of Indian Affairs	308	--	255	--	- 53	--
Subtotal, Permanents, Trusts and Allocation Accounts	336	11,052	282	16,500	- 54	+ 5,448
TOTAL, BUREAU OF RECLAMATION	8,658	771,213	8,361	950,320	- 297	+179,107
Total, Energy and Water Development	8,658	771,213	8,361	950,320	- 297	+179,107
(Annual Appropriations)	(8,322)	(760,161)	(8,079)	(933,820)	(-243)	(+173,659)
(Other Accounts)	(336)	(11,052)	(282)	(16,500)	(- 54)	(+ 5,448)
TOTAL, INTERIOR PROGRAMS	79,312	5,913,571	75,944	6,076,575	-3,368	+163,004
(Annual Appropriations)	(73,520)	(4,563,380)	(70,387)	(4,510,800)	(-3,133)	(- 52,580)
(Other Accounts)	(5,792)	(1,350,191)	(5,557)	(1,565,775)	(- 235)	(+215,584)
ENERGY PROGRAMS						
Appropriation:						
Total Approp. (annual appropriations)	5,625	930,088	5,623	1,188,090	- 2	+258,002
TOTAL, ENERGY PROGRAMS	5,625	930,088	5,623	1,188,090	- 2	+258,002
COMBINED TOTAL, INTERIOR AND ENERGY PROGRAMS	84,937	6,843,659	81,567	7,264,665	-3,370	+421,006
(Annual Appropriations)	(79,145)	(5,493,468)	(76,010)	(5,698,890)	(-3,135)	(+205,422)
(Other Accounts)	(5,792)	(1,350,191)	(5,557)	(1,565,775)	(-235)	(+215,584)

TABLE 2

Comparison of 1983 Estimate with 1983 Base Budget

Full-Time Equivalent Employment
and Budget Authority [1]

(Dollar amounts in thousands)

Bureau/Appropriation	1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
BUREAU OF LAND MANAGEMENT						
Appropriations:						
Management of Lands and Resources	9,885	371,779	8,693	373,527	- 192	+ 1,748
Acquisition, Construction and Maintenance	—	—	—	—	—	—
Land Acquisition	—	—	—	—	—	—
Construction, Access & Land Acquisition	41	5,639	49	2,711	+ 8	- 2,928
Payments in Lieu of Taxes	5	95,520	5	45,000[2]	—	- 50,520
Oregon and California Grant Lands	1,110	52,788	1,060	52,883	- 50	+ 95
Service Charges, Deposits & Forfeitures	114	9,600	114	10,000	—	+ 400
Range Improvements	223	13,226	187	11,048	- 36	- 2,178
Miscellaneous Trust Funds (Current)	—	100	—	100	—	—
Subtotal, Appropriations	10,378	548,652	10,108	495,269	- 270	- 53,383
Permanent Appropriations & Trust Funds	19	597,299	19	761,061	—	+163,762
Other Accounts:						
Working Capital Fund	18	—	18	—	—	—
Reimbursements	166	—	166	—	—	—
Allocation Accounts Other Agencies	67	—	57	—	- 10	—
TOTAL, BUREAU OF LAND MANAGEMENT	10,648	1,145,951	10,368	1,256,330	- 280	+110,379
OFFICE OF WATER RESEARCH AND TECHNOLOGY						
Appropriations:						
Salaries and expenses	31	13,381	—[3]	—[3]	- 31[3]	- 13,381[3]
Other (reimbursements)	(11)	(825)	(—)[3]	(—)[3]	(—)[3]	(—)[3]
TOTAL, OFFICE OF WATER RESEARCH & TECHNOLOGY	31	13,381	—	—	- 31	- 13,381
U.S. FISH AND WILDLIFE SERVICE						
Appropriations:						
Resource Management	5,929	225,215	5,430	218,922	- 499	- 6,293
Construction	147	6,683	147	12,705	—	+ 6,022
Land Acquisition	10	16,491	10	1,567	—	- 14,924
Migratory Bird Conservation Account - Advance	—	1,200	—	—	—	- 1,200
National Wildlife Refuge Fund - Payments in Lieu of Taxes	—	5,760	—	—	—	- 5,760
Subtotal, Appropriations	6,086	255,349	5,587	233,194	- 499	- 22,155

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[1] Budget authority shown for Interior and Related Agencies Appropriation accounts only. Bureau of Reclamation not included. Department of Energy programs proposed for transfer not included.

[2] Proposed for later transmittal, proposed legislation.

[3] Reported in the budget highlights of the Bureau of Reclamation.

(Dollar amounts in thousands)

Bureau/Appropriation	1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
U.S. FISH AND WILDLIFE SERVICE (Cont'd)						
Permanents and Trusts	353	169,271	353	182,909	--	+ 13,638
Advances and Reimbursements	621	—	576	—	- 45	—
Subtotal, Permanents and Trusts	974	169,271	929	182,909	- 45	+ 13,638
TOTAL, U.S. FISH AND WILDLIFE SERVICE	7,060	424,620	6,516	416,103	- 544	- 8,517
NATIONAL PARK SERVICE						
Appropriations:						
Operation of the National Park System	15,313	524,619	15,011	539,703	- 302	+ 15,084
National Recreation and Preservation	295	8,850	193	6,987	- 102	- 1,863
Construction	698	85,172	698	123,721	—	+ 38,549
John F. Kennedy Center for the Performing Arts	106	4,197	101	3,986	- 5	- 211
Urban Park and Recreation Fund	—	7,680	22	—	+ 22	- 7,680
Land Acquisition	267	99,869	190	59,776	- 77	- 40,093
Historic Preservation Fund	—	25,440	24	—	+ 24	- 25,440
Subtotal, Appropriations	16,679	755,827	16,239	734,173	- 440	- 21,654
Permanents and Trust Funds						
Miscellaneous Permanent	2	405	2	405	—	—
Trust Funds	21	1,764	21	1,700	—	- 64
Subtotal, Permanents and Trusts	23	2,169	23	2,105	—	- 64
Other (Transfers and Reimbursables)	537	—	536	—	- 1	—
TOTAL, NATIONAL PARK SERVICE	17,239	757,996	16,798	736,278	- 441	- 21,718
U.S. GEOLOGICAL SURVEY						
Appropriations:						
Surveys, Investigations and Research	10,730	507,312	10,304	507,577	- 426	+ 265
Barrow Area Gas-Operation Exploration and Development	13	2,196	15	6,400	—	+ 4,204
Subtotal, Appropriations	10,743	509,508	10,319	513,977	- 426	+ 4,469
Legislative Program:						
Digital Cartography	92	3,873	92	3,873	—	—
Reimbursements	2,289	—	2,205	—	- 84	—
TOTAL, U.S. GEOLOGICAL SURVEY	13,126	513,381	12,616	517,850	- 510	+ 4,469
BUREAU OF MINES						
Appropriation:						
Mines and Minerals	2,548	151,124	2,272	124,676	- 276	- 26,448
Trust Funds and Miscellaneous Accounts:						
Contributed Funds	23	800	23	800	—	—
Miscellaneous Accounts	429	—	429	—	—	—
Subtotal, Trust Funds & Miscellaneous	452	800	452	800	—	—
TOTAL, BUREAU OF MINES	3,000	151,924	2,724	125,476	- 276	- 26,448
OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT						
Appropriations:						
Regulation & Technology	566	62,903	525	62,173	- 41	- 730
Abandoned Mine Reclamation Fund	328	98,342	262	97,649	- 66	- 693
TOTAL, OFFICE OF SURFACE MINING	894	161,245	787	159,822	- 107	- 1,423

(Dollar amounts in thousands)

Bureau/Appropriation	1983 Base Budget FTE/T	1983 Base Budget Amount	1983 Estimate FTE/T	1983 Estimate Amount	Change from Base FTE/T	Change from Base Amount
BUREAU OF INDIAN AFFAIRS						
Appropriations:						
Operation of Indian Programs	15,345	825,187	14,470	849,250	- 875	+ 24,063
Indian Education Assistance	68	71,547 4/	68	51,119	—	- 20,428
Construction	90	93,628	87	106,000 5/	- 3	+ 12,372
Impact Aid: School Construction Affecting Indian Land	22	9,006	21	838	- 1	- 8,166
Road Construction	665	47,485	665	43,585	—	- 3,900
Eastern Indian Land Claims Fund	—	—	—	—	—	—
Subtotal, Appropriations	16,190	1,046,851	15,311	1,050,792	- 879	+ 3,941
Permanents and Trusts, Subtotal	534	568.400	534	601,200	—	+ 32,800
TOTAL, BUREAU OF INDIAN AFFAIRS	16,724	1,615,251	15,845	1,651,992	- 879	+ 36,741
OFFICE OF TERRITORIAL AND INTERNATIONAL AFFAIRS						
Appropriations:						
Trust Territory of the Pacific Islands	30	76,557	30	75,500	—	- 1,057
Administration of Territories	114	90,776	110	58,076	- 4	- 32,700
Subtotal, Appropriations	144	167,333	140	133,576	- 4	- 33,757
Permanents and Trusts, Subtotal	—	54,200	—	54,200	—	—
TOTAL, TERRITORIAL & INTERNATIONAL AFFAIRS	144	221,533	140	187,776	- 4	- 33,757
OFFICE OF THE SOLICITOR						
Appropriations:						
Salaries and Expenses	376	18,039	376	19,071	—	+ 1,032
TOTAL, OFFICE OF THE SOLICITOR	376	18,039	376	19,071	—	+ 1,032
OFFICE OF THE SECRETARY						
Appropriations:						
Departmental Management	744	42,727	746	44,157	+ 2	+ 1,430
Construction Management	18	3,840	18	—	—	- 3,840
Inspector General	217	10,219	238	11,400	+ 21	+ 1,181
Subtotal, Appropriations	979	56,786	1,002	55,557	+ 23	- 1,229
Other Accounts, Subtotal	428	—	411	—	- 17	- —
TOTAL, OFFICE OF THE SECRETARY	1,407	56,786	1,413	55,557	+ 6	- 1,229
TOTAL, INTERIOR AND RELATED AGENCIES	70,649	5,080,107	67,583	5,126,255	-3,066	+ 46,148

Note: Indian Education Program accounts proposed to be transferred from the Department of Education are included above in the appropriation accounts for Indian Education Assistance and Impact Aid: School Construction Affecting Indian Land.

4/ Assumes rescission in FY 1982 of $6,255,000.

5/ Includes $29,800 (Ak Chin Irrigation Project) proposed for later transmittal, proposed legislation.

TABLE 3

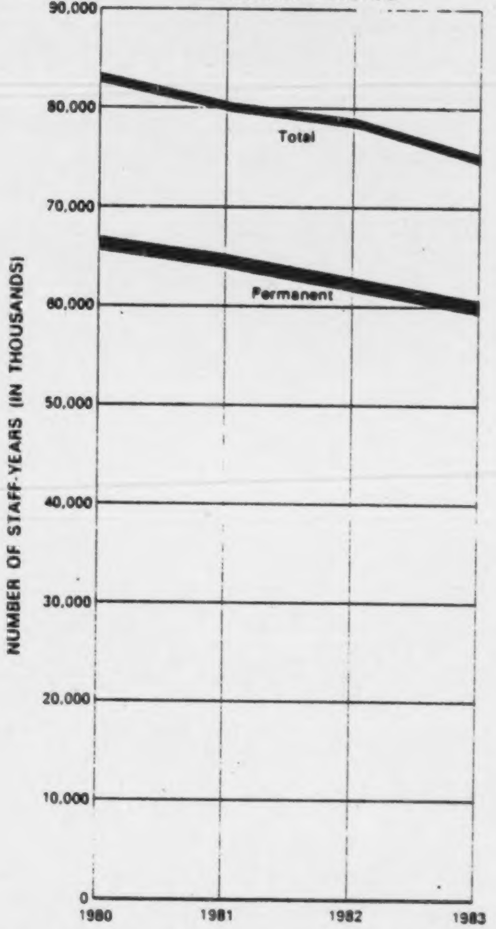
Current Estimate of Receipts
FY 1981, 1982 and 1983

(In thousands of dollars)

	FY 1981 Actual	FY 1982 Estimate	FY 1983 Estimate	Net Change FY 1983 Over FY 1982
DEPARTMENT OF THE INTERIOR				
Offsetting Receipts				
Grazing Fees	27,235	24,239	23,969	- 270
Oregon & Calif. & Coos Bay	200,073	233,302	251,167	+ 17,865
Oil & Gas Royalties & Rents	505,895	909,302	785,874	- 123,428
Collections, Reclamation Fund	356,185	460,844	545,971	+ 85,127
All Other	733,274	784,703	891,344	+ 106,641
Offsetting Receipts	1,822,662	2,412,390	2,498,325	+ 85,935
Governmental Receipts				
Coal mining Reclamation Fee	192,083	210,637	216,956	+ 6,319
All Other	637,539	21,753	18,796	- 2,957
Governmental Receipts	829,622	232,390	235,752	+ 3,362
Undistributed Proprietary Outer Continental Shelf	10,137,986	7,861,000	18,000,000	+10,139,000
Undistributed Interfund Interest on investments in Federal Securities & funds on deposit in Treasury	24,571	20,314	21,514	+ 1,200
Total Receipts, Department Of the Interior	12,814,841	10,526,094	20,755,591	+10,229,497
DEPARTMENT OF ENERGY				
Offsetting Receipts				
Sale of minerals	978,827	1,123,000	1,087,000	- 36,000
Sale & transmission of electric energy	127,514	144,629	152,080	+ 7,451
Sale of Utilities, reclamation fund	195,282	218,000	238,200	+ 20,200
Revenues, Colo. River Dam fund	11,862	16,578	18,776	+ 2,198
Strategic Petroleum Reserve Entitlements receipts	542,146	--	--	--
Total Receipts, Department of Energy	1,855,631	1,302,207	1,496,056	- 6,151
TOTAL RECEIPTS	14,670,472	12,028,301	22,251,647	+10,223,346
Total Offsetting Receipts	3,678,293	3,914,597	3,994,381	+ 79,784

TABLE 4

DEPARTMENT OF THE INTERIOR
EMPLOYMENT TRENDS



	1980	1981	1982	1983
Total	82,284	80,981	79,243	75,859
Permanent	66,653	65,337	63,200	60,293
Other	15,631	15,644	16,035	15,566

The term "Full-Time Equivalent" (FTE) expresses the total staff years worked by an agency's employees during a fiscal year. The major difference between FTE and the older "End of Year/Positions," is that the old system was a "snapshot" system which calculated employment levels on the last day of the fiscal year. The FTE method uses a cumulative measure which takes into account employment levels throughout the year. Under the FTE method the definition of Full Time Permanent is broadened to include all employees who have permanent Civil Service appointments. Under the old system, employees with permanent appointments who were scheduled to work only a part of the year, i.e., school teachers, etc., were excluded from the Full Time Permanent category, even though they worked "full time" for a part of the year. Currently, these positions are included as Full Time Permanent.

BUREAU OF LAND MANAGEMENT

The Bureau of Land Management is currently responsible for the conservation, management and development of 325 million acres of public lands, including 150 million acres in Alaska. Of these, 75 million acres in Alaska will ultimately be conveyed to other parties (Alaska natives, the State of Alaska, and other agencies). The Bureau also administers mining and mineral leasing on 370 million acres of Federal mineral estate underlying other ownerships, and approximately 1.1 billion acres of the Outer Continental Shelf.

SUMMARY OF BUREAU APPROPRIATIONS

Comparison of 1983 Estimate with 1982 Estimate: (Dollar amounts in thousands)

	1982 Estimate		1983 Estimate		Change from 1982	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriations:						
Management of Lands and Resources	8,618	355,326	8,693	373,527	+ 75	+18,201
Acquisition, Construction & Maintenance	303	12,211	—	—	- 303	-12,211
Land Acquisition	5	3,012	—	—	- 5	- 3,012
Construction, Access and Land Acquisition	—	—	49	2,711	+ 49	+ 2,711
Payments in Lieu of Taxes	5	95,520	5	45,000[1]	—	-50,520
Oregon and California Grant Lands	1,110	52,788	1,060	52,883	- 50	+ 95
Range Improvements	223	13,226	187	11,048	- 36	- 2,178
Service Charges, Deposits and Forfeitures	114	9,600	114	10,000	—	+ 400
Miscellaneous Trust Funds (current)	—	100	—	100	—	—
Subtotal, Appropriations Requested	10,378	541,783	10,108	495,269	- 270	-46,514
Proposed 1982 Supplementals:						
Fire Fighting and Rehabilitation	—	60,000	—	—	—	-60,000
Permanents and Trusts:						
Miscellaneous Permanent Appropriations	—	596,699	—	760,461	—	+163,762
Miscellaneous Trust Funds (indefinite)	19	600	19	600	—	—
Subtotal, Permanents and Trusts	19	597,299	19	761,061	—	+163,762
Other Accounts:						
Working Capital Fund	18	—	18	—	—	—
Reimbursements	166	—	166	—	—	—
Allocation Accounts Other Agencies	67	—	57	—	-10	—
TOTAL, BUREAU OF LAND MANAGEMENT	10,648	1,199,082	10,368	1,256,330	-280	+57,248

Comparison of 1983 Estimate with 1983 Base Budget:

	1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriations:						
Management of Lands and Resources	8,885	371,779	8,693	373,527	- 192	+ 1,748
Acquisition, Construction and Maintenance	—	—	—	—	—	-
Land Acquisition	—	—	—	—	—	—
Construction, Access and Land Acquisition	41	5,639	49	2,711	+ 8	- 2,928
Payments in Lieu of Taxes	5	95,520	5	45,000[1]	—	- 50,520
Oregon and California Grant Lands	1,110	52,788	1,060	52,883	- 50	+ 95
Range Improvements						
Service Charges, Deposits and Forfeitures	114	9,600	114	10,000	—	+ 400
Miscellaneous Trust Funds (current)	—	100	—	100	—	—
Subtotal, Appropriations Requested	10,378	548,652	10,108	495,269	- 270	- 53,383
Permanent Appropriations and Trust Funds	19	597,299	19	761,061	—	+163,762
Other Accounts:						
Working Capital Fund	18	—	18	—	—	—
Reimbursements	166	—	166	—	—	—
Allocation Accounts Other Agencies	67	—	57	—	- 10	—
TOTAL, BUREAU OF LAND MANAGEMENT	10,648	1,145,951	10,368	1,256,330	- 280	+110,379

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[1] Proposed for later transmittal, proposed legislation

TABULAR INFORMATION AND HIGHLIGHTS OF BUDGET CHANGES
(By appropriation)

APPROPRIATION: MANAGEMENT OF LANDS AND RESOURCES (dollar amounts in thousands)

Summary of Requirements

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available 1982			8,618	355,326
Adjustments to base and built-in changes:				
FY 1983 allowance for FY 1982 pay cost	—	+3,730		
FY 1983 allowance for standard level user charge	—	+2,375		
Program shifts:				
From Non-energy Related Realty	—	-1,800		
To Non-energy Onshore	—	+1,800		
Transfer of Maintenance and Engineering from Acquisition, Construction, and Maintenance appropriation	+ 267	+9,584		
Increase for Bureau employee compensation	—	+ 764		
Total, Adjustments to base and built-in changes			+ 267	+16,453
1983 Base Budget			8,885	371,779
Program changes (Changes to base budget, detailed below)			- 192	+ 1,748
Total Requirements (1983 Estimate)			8,693	373,527

Comparison by Activity/Subactivity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Energy & Minerals Management:								
Energy Onshore	1,008	41,159	1,008	41,672	1,079	44,772	+ 71	+ 3,100
Energy Offshore	288	39,738	288	39,900	343	43,950	+ 55	+ 4,050
Nonenergy Onshore	311	7,782	311	9,729	317	10,179	+ 6	+ 450
Subtotal, Energy and Minerals Management	1,607	88,679	1,607	91,301	1,739	98,901	+ 132	+ 7,600
Lands and Realty Management:								
Energy Related Realty	197	5,514	197	5,616	217	7,316	+ 20	+ 1,700
Nonenergy Related Realty	718	22,761	718	21,324	768	24,574	+ 50	+ 3,250
Withdrawal Processing and and Review	146	4,088	146	4,148	126	3,748	- 20	- 400
Subtotal, Lands & Realty Management	1,061	32,363	1,061	31,088	1,111	35,638	+ 50	+ 4,550
Renewable Resources Management:								
Forest Management	217	8,170	217	8,251	172	6,051	- 45	- 2,200
Range Management	1,098	40,986	1,098	41,481	1,028	36,581	- 70	- 4,900
Recreation Management	453	23,818	453	24,025	448	21,975	- 5	- 2,050
Soil, Water, & Air Mgmt.	340	16,932	340	17,072	295	14,772	- 45	- 2,300
Wildlife Habitat Mgmt.	376	14,778	376	14,942	346	13,642	- 30	- 1,300
Fire Management	273	7,153	273	7,284	278	9,234	+ 5	+ 1,950
Subtotal, Renewable Resources Management	2,757	111,837	2,757	113,055	2,567	102,255	- 190	-10,800
Planning and Data Management								
Planning	248	8,544	248	8,631	183	7,131	- 65	- 1,500
Data Management	233	11,900	233	12,010	233	12,910	—	+ 900
Subtotal, Planning and Data Management	481	20,444	481	20,641	416	20,041	- 65	- 600
Cadastral Survey								
Subtotal, Cadastral Survey	479	19,254	479	19,481	479	20,281	—	+ 800
Firefighting and Rehabilitation								
Subtotal, Firefighting and Rehabilitation	911	4,560	911	4,560	812	4,750	- 99	+ 190
Technical Services								
Subtotal, Tech. Serv.	24	1,342	291	11,271	308	13,018	+ 17	+ 1,747
General Administration								
Subtotal, Gen. Admin.	1,298	76,667	1,298	80,382	1,261	78,643	- 37	- 1,739
TOTAL, APPROPRIATION	8,618	355,326	8,885	371,779	8,693	373,527	- 192	+ 1,748

APPROPRIATION: MANAGEMENT OF LANDS AND RESOURCES (Cont'd)

Highlights of Budget Changes

	Change from Base	
	FTE-T	Amount
Energy Onshore	+ 71	+3,100
Oil and Gas For additional post-lease capability as a result of increased FY 1982 leasing to eliminate BLM lease application backlog in first quarter of FY 1983 and continue efforts to eliminate remaining non-BLM backlog by FY 1984.	(+ 89)	(+3,750)
Coal For fewer technical investigations, environmental impact statements, and lower priority inventories, yet maintaining the schedule for coal lease sales in 1983.	(- 28)	(-2,100)
Geothermal For issuing 600 additional simultaneous non-competitive leases and for increasing post-lease activities (i.e., processing Notices of Intent and Geothermal Drilling Permits).	(+ 10)	(+ 550)
Oil Shale/Tar Sands To establish a permanent oil shale leasing program, to support the expanded prototype oil shale program, by issuing up to two prototype leases in FY 1983, and issuance of leases under the permanent program by March 1984; and to continue the tar sands leasing program with a goal of holding the first lease sale by FY 1984.	(—)	(+ 900)
Energy Offshore	+ 55	+4,050
Offshore Oil and Gas To streamline and expand OCS leasing under the proposed five-year Offshore Oil and Gas Leasing program of July, 1981, by holding 9 sales.	(+ 55)	(+2,839)
Offshore Environmental Studies To fund additional studies necessary to implement program changes directed by the Secretary.	(—)	(+1,211)
Non-Energy Onshore	+ 6	+ 450
Mineral Materials Sales To meet growing industry demand for sand and gravel, associated with energy development projects.	(+ 6)	(+ 250)
Mining Law Administration To increase capabilities for completing reviews and compliance checks on plans of operation and notices to meet review periods established by regulation.	—	(+ 200)
Energy-Related Realty To process an additional 350 applications for roads to well sites and 530 applications for other rights-of-way, all related to energy development and transmission projects.	+ 20	+1,700
Nonenergy-Related Realty In the Lower 48 States, to process 730 land use authorization and land tenure adjustment cases and reduce the backlog to a workable level by the end of FY 1983; and in Alaska, to process an additional 2,380 Native allotments to provide accurate exclusion from conveyances relating both to native and state selections.	+ 30	+3,250
Withdrawal Processing and Review To complete the required review of existing public land withdrawals by the statutory deadline of 1991 using a streamlined process of reviewing withdrawals under the jurisdiction of other Federal agencies.	- 20	- 400
Forest Management To reduce forest management and development activities in marginal timber producing areas, and the level of inventory, and environmental assessments because of completion of the major portion of the workload in prior years.	- 45	-2,200

APPROPRIATION: MANAGEMENT OF LANDS AND RESOURCES (Cont'd)

Highlights of Budget Changes

	Change from Base	
	FTE-T	Amount
Range Management	- 70	-4,900
Wild Horses and Burros To reduce the number of animals removed by 1,900; to also complete ongoing wild horse and burro research, and make a report to Congress on the research by January 1, 1983, as required.	(- 10)	(-1,100)
Grazing Management To increase the supervision and monitoring of range conditions on allotments, offset by a reduction in the number of Allotment Management Plans implemented, the number of acres inventoried, and the amount of maintenance work done on fences and facilities.	(- 60)	(-3,800)
Recreation Management	- 5	-2,050
Wilderness Management To conduct mineral surveys only in those areas found suitable for wilderness designation and conduct more cost effective BLM mineral assessments as part of the BLM planning system.	(—)	(-1,850)
Recreation Resources Management To designate 2 million acres of public land as open, closed or limited to off-road vehicle (ORV) use, and implement ORV designations on 24 million acres previously designated, which will maintain a minimum management program consistent with recreational demand.	(- 5)	(- 200)
Soil, Water, and Air Management To reduce soil and water inventories from the FY 1982 level while still providing the minimum level needed to meet the grazing EIS schedule and energy leasing goals.	- 65	-2,300
Wildlife Habitat Management To reduce the number of Habitat Management Plans implemented, the number of acres inventoried, and the number of wildlife research projects to provide program capability for multi-year monitoring.	- 30	-1,300
Fire Management To purchase equipment to improve the Automatic Lightning Detection System.	+ 5	+1,950
Planning To increase reliance on existing plans, streamlined procedures and regulations.	- 65	-1,500
Data Management To support energy program efforts through development of appropriate application packages; and for additional equipment maintenance, leases, telecommunication costs, and purchase of a graphics minicomputer system.	—	+ 900
Cadastral Survey	—	+ 800
Alaska To survey an additional 65 native allotment inholdings to expedite conveyances to Natives by support of adjudication and field examinations.	(—)	(+ 400)
Lower 48 To survey an additional 35,000 acres for land operations and 45,000 acres for energy development to accelerate resolution of occupancy trespass and facilitate energy development.	(—)	(+ 400)
Firefighting and Rehabilitation To restore the standard base amount necessary to initiate emergency actions to prevent and suppress wildfires.	- 99	+ 190

APPROPRIATION: MANAGEMENT OF LANDS AND RESOURCES (Cont'd)

Highlights of Budget Changes

	Change from Base FTE-T	Change from Base Amount
Technical Services	+ 17	+1,747
Resource Protection To put additional cooperative agreements into effect and increase capability to investigate theft and unauthorized use cases.	(+ 2)	(+ 450)
Maintenance To improve maintenance on the Bureau's buildings, recreation facilities and roads.	(+ 12)	(+1,121)
Engineering Services To provide additional engineering technical assistance, design, and program support required by Bureau programs.	(+ 3)	(+ 176)
General Administration	- 37	-1,739

To provide a reduction in administrative support personnel because of uncontrollable increases in Bureauwide fixed costs, such as space rental, telephone and postal costs.

APPROPRIATION: [ACQUISITION, CONSTRUCTION and MAINTENANCE - LAND ACQUISITION] CONSTRUCTION, ACCESS and LAND ACQUISITION

Summary of Requirements

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			308	15,223
Adjustments to base and built-in changes:				
Program shifts:				
Transfer of Maintenance and Engineering Costs to MLR	- 267	-9,584		
Total, Adjustments to base and built-in changes			- 267	- 9,584
1983 Base Budget			41	5,639
Program changes (Changes to base budget, detailed below)			+ 8	- 2 928
Total Requirements (1983 Estimate)			49	2,711

Comparison by Activity/Subactivity

	1982 Estimate		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Construction:								
Building	15	544	—	392	—	258		- 134
Recreation	11	607	—	502	—	460		- 42
Transportation	43	679	—	—	—	—		—
Subtotal, Construction	69	1,830	—	894	—	718		- 176
Access Acquisition	36	1,733	36	1,733	41	1,525	+ 5	- 208
Maintenance:								
Building	56	2,782	—	—	—	—	—	—
Recreation	93	3,298	—	—	—	—	—	—
Transportation	49	2,568	—	—	—	—	—	—
Subtotal, Maintenance	198	8,648	—	—	—	—	—	—
Land Acquisition	5	3,012	5	3,012	8	468	+ 3	- 2,544
TOTAL, APPROPRIATION*	308	15,223	41	5,639	49	2,711	+ 8	- 2,928

*1982 Estimate includes Acquisition, Construction and Maintenance - Land Acquisition.

APPROPRIATION: [ACQUISITION, CONSTRUCTION and MAINTENANCE - LAND ACQUISITION] CONSTRUCTION, ACCESS and LAND ACQUISITION (Cont'd)

Highlights of Budget Changes

	Change from Base FTE-T	Change from Base Amount
Construction	—	- 176
To construct two comfort stations at Senator Wash Recreation complex (California), a half mile of sewer lines at the Galena Fire Station (Alaska), and additional camping units and a water distribution system at the Organ Mountain Recreation Site (New Mexico).		
Access	+ 5	- 208
To purchase 139 access right-of-ways.		
Land Acquisition	+ 3	-2,344
For payment of anticipated deficiencies in condemnation cases on the Rogue Wild and Scenic River (Oregon) and the Pacific Crest Trail.		

APPROPRIATION: PAYMENTS IN LIEU OF TAXES

Summary of Requirements

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			5	95,520
Adjustments to base and built-in changes:				
None	—	—		
1983 Base Budget			5	95,520
Program changes (Changes to base budget, detailed below)			—	-50,520
Total Requirements (1983 Estimate)			5	45,000

Comparison by Activity/Subactivity

	1982 Appropriation FTE/T	1982 Appropriation Amount	1983 Base Budget FTE/T	1983 Base Budget Amount	1983 Estimate FTE/T	1983 Estimate Amount	Change from Base FTE/T	Change from Base Amount
Payments in Lieu of Taxes	5	95,520	5	95,520	5	45,000	—	-50,520

Highlights of Budget Changes

	Change from Base FTE-T	Change from Base Amount
Payments in Lieu of Taxes	—	-50,520

The request is proposed for later transmittal along with proposed legislation.

APPROPRIATION: OREGON AND CALIFORNIA GRANT LANDS -

Summary of Requirements

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982...........................			1,110	52,788
Adjustments to base and built-in changes:				
None..	—	—	—	—
1983 Base Budget..			1,110	52,788
Program changes (Changes to base budget, detailed below).........			- 50	+ 95
Total Requirements (1983 Estimate)................................			1,060	52,883

Comparison by Activity/Subactivity

	1982 Estimate (Adjusted)		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Construction and Acquisition								
Building Construction......	3	56	3	56	—	—	-3	-56
Recreation Construction....	6	144	6	144	2	55	-4	-89
Transportation Construction	9	3,067	9	3,067	9	636	—	-2,431
Access Acquisition..........	15	654	15	654	9	400	-6	-254
Subtotal, Construction and Acquisition........	33	3,921	33	3,921	20	1,091	-13	-2,830
Maintenance								
Building Maintenance.......	8	586	8	586	8	500	—	-86
Recreation Maintenance.....	36	1,080	36	1,080	36	1,000	—	-80
Transportation Maintenance.	123	4,555	123	4,555	123	3,500	—	-1,055
Subtotal, Maintenance....	167	6,221	167	6,221	167	5,000	—	-1,221
Renewable Resources Management								
Timber Management and Development..............	797	37,245	797	37,245	774	41,240	-23	+3,995
Timber Protection..........	18	2,714	18	2,714	18	2,714	—	—
Other Forest Resources.....	72	2,131	72	2,131	68	2,386	-4	+255
Subtotal, Renewable Resource Management....	887	42,090	887	42,090	860	46,340	-27	+4,250
Planning and Data Management								
Planning....................	17	411	17	411	6	247	-11	-164
Data Management............	6	145	6	145	7	205	+1	+60
Subtotal, Planning and Data Management........	23	556	23	556	13	452	-10	-104
TOTAL, APPROPRIATION	1,110	52,788	1,110	52,788	1,060	52,883	-50	+95

Highlights of Budget Changes

	Change from Base	
	FTE-T	Amount
Construction and Acquisition	- 13	-2,830

To provide for 40 road easements to commercial timber areas and survey and design of future projects. No construction projects are planned for 1983.

Maintenance	—	-1,221

A decrease of $1,055 thousand in Transportation Maintenance is possible by holding the maintenance of secondary roads to a minimum level while continuing to carry out all scheduled maintenance for primary road sites. Building and Recreation maintenance will incur small decreases.

Renewable Resource Management	- 27	+4,250

The total increase in this activity supports additional work in reforestation, stand improvement, mortality salvage commercial thinning, forest genetics, timber management, protection, and other resource management actions on the O&C lands necessary to offer the allowable cut of 1.1 billion board feet of timber.

APPROPRIATION: OREGON AND CALIFORNIA GRANT LANDS (Cont'd)

	Change from Base FTE-T	Change from Base Amount
Planning and Data Management	- 10	- 104

The projected completion of the planning phase for western Oregon timber EIS's in 1982 accounts for the net decrease. The 1983 program will provide for updating of Bureau planning system documents and for additional automated data processing requirements.

APPROPRIATION: RANGE IMPROVEMENTS

Summary of Requirements

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available 1982			223	13,226
Adjustments to base and built-in changes:				
None	—	—	—	—
1983 Base Budget			223	13,226
Program changes (Changes to base budget, detailed below)			-36	- 2,178
Total Requirements (1983 Estimate)			187	11,048

Comparison by Activity/Subactivity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Improvements to Public Lands	210	11,601	210	11,601	174	9,598	-36	-2,003
Farm Tenant Act Lands	13	950	13	950	13	850	—	-100
Administration Expenses	—	675	—	675	—	600	—	-75
TOTAL, REQUIREMENTS	223	13,226	223	13,226	187	11,048	-36	-2,178

Highlights of Budget Changes

	Change from Base FTE-T	Change from Base Amount
Range Improvements	- 36	-2,178

The grazing fee will decrease from $2.31 per AUM in 1982 to $1.86 in 1983 resulting in lower grazing receipts available for this appropriation. This will reduce accomplishments in the development and maintenance of range improvements projects.

APPROPRIATION: SERVICE CHARGES, DEPOSITS and FORFEITURES

Summary of Requirements

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available 1982			114	9,600
Adjustments to base and built-in changes:				
None	—	—	—	—
1983 Base Budget			114	9,600
Program changes (Changes to base budget, detailed below)			—	+ 400
Total Requirements (1983 Estimate)			114	10,000

Comparison by Activity/Subactivity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Rights-of-way Processing	112	7,920	112	7,920	112	8,000	—	+ 80
Adopt-a-Horse Program	—	864	—	864	—	1,150	—	+ 286
Repair of Damaged Lands	2	816	2	816	2	850	—	+ 34
TOTAL, APPROPRIATION	114	9,600	114	9,600	114	10,000	—	+ 400

APPROPRIATION: SERVICE CHARGES, DEPOSITS and FORFEITURES (Cont'd)

Highlights of Budget Changes

	Change from Base FTE-T	Change from Base Amount
Rights-of-way Processing	—	+ 80
Increased revenues received offset administrative and other costs incurred in processing applications for rights-of-way and inspection and monitoring of construction, operation and termination of rights-of-way.		
Adopt-a-Horse Program	—	+ 286
Increased adoption fees will permit recovery of additional program costs.		
Repair of Damaged Lands	—	+ 34
Increased revenues provide for rehabilitation of lands and facilities damaged by resource developers, timber purchasees or permitees who do not fulfill the requirements of contracts or permits.		

APPROPRIATION: PERMANENTS AND TRUSTS

Summary of Requirements

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available 1982			19	597,399
Adjustments to base and built-in changes:				
None	—	—	—	—
1983 Base Budget			19	597,399
Program changes to base budget			—	+163,762
Total Requirements (1983 Estimate)			19	761,161

Comparison by Activity/Subactivity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Miscellaneous Permanent Appropriations	—	596,699	—	596,699	—	760,461	—	+163,762
Miscellaneous Trust Funds	19	700	19	700	19	700	—	—
TOTAL APPROPRIATIONS	19	597,399	19	597,399	19	761,161	—	+163,762

Highlights of Budget Changes

	Change from Base FTE-T	Change from Base Amount
Miscellaneous Permanents	—	+163,762

Increase payments to States and Counties for their share of increased mineral and other revenues and increased road maintenance deposits by users to maintain roads under jurisdiction of BLM.

OFFICE OF WATER RESEARCH AND TECHNOLOGY

The Office of Water Research and Technology (OWRT) administers programs of water resources research, development, demonstration, technology transfer and information dissemination. In accordance with the Administration's programs, Congress reduced FY 1982 appropriations for these programs. No funds are requested for these programs for FY 1983. Essential and high priority work in water reuse and saline water conversion research and development will be completed in FY 1982. Federal support for the 54 water resources research institutes and for essential technology transfer will continue until September 30, 1982. The water resources scientific information center (WRSIC) will continue through FY 1982 and then transfer to the Geological Survey. In addition, OWRT conducts two reimbursable international programs by providing assistance and expertise on desalination projects in Israel and Saudi Arabia. These programs are not affected by appropriations to OWRT, and at the end of FY 1982, will be transferred to and continue in the Bureau of Reclamation.

SUMMARY OF BUREAU APPROPRIATION

(Dollar amounts in thousands)

Comparison of 1983 Estimate With 1982 Appropriations:

	1982 Appropriation		1983 Estimate		Change from 1982	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriations:						
Salaries and expenses........................	31	10,636	—	—	-31	-10,636
Reimbursements (international program)........	(11)*	(825)	(—)**	(—)**	(—)**	(—)**
TOTAL, OFFICE OF WATER RESEARCH AND TECHNOLOGY	31	10,636	—	—	-31	-10,636

*FTE for international reimbursable program not included in bureau total.
**Reported in the budget highlights of the Bureau of Reclamation.

Comparison of 1983 Estimate with 1983 Base Budget:

	1983 Base Budget		1983 Estimate		Change from 1982	
	FTE/T:	Amount	FTE/T	Amount	FTE/T	Amount
Appropriations:						
Salaries and expenses........................	31	13,381	—	—	-31	-13,381
Reimbursements (international program)........	(11)*	(825)	(—)**	(—)**	(—)**	(—)**
TOTAL, OFFICE OF WATER RESEARCH AND TECHNOLOGY	31	13,381			-31	-13,381

*FTE for international reimbursable program not included in bureau total.
**Reported in the budget highlights of the Bureau of Reclamation.

TABULAR INFORMATION AND HIGHLIGHTS OF BUDGET CHANGES
(By appropriation)

APPROPRIATION: SALARIES AND EXPENSES

Summary of Requirements

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982..........................			31	13,381 1/
Adjustments to base and built-in changes:........................			—	—
1983 Base Budget..			31	13,381
Program changes (Changes to base budget, detailed below)........			-31	-13,381
Total Requirements (1983 Estimate)..............................			—	—

1/ Includes FY 1981 deferral of $2,745,000.

APPROPRIATION: SALARIES AND EXPENSES (Conc'd.)

(Dollar amounts in thousands)

Comparison by Activity/Subactivity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Water Resources Research & Development:								
State Water Resources Research Institutes......	3	3,216	3	5,961	—	—	-3	-5,961
Water Research & Development Reuse..............	2	912	2	912	—	—	-2	-912
Total, Water Resources R&D.......	5	4,128	5	6,873	—	—	-5	-6,873
Saline Water Research & Development:								
Saline Water Research.....	2	384	2	384	—	—	-2	-384
Saline Water Development..	6	3,456	6	3,456	—	—	-6	-3,456
Total, Saline Water R&D.................	8	3,840	8	3,840	—	—	-8	-3,840
Technology Transfer & Info. Dissemination:								
Technology Transfer.......	2	144	2	144	—	—	-2	-144
Water Resources Sci. Info. Center (WRSIC)...........	5	576	5	576	—	—	-5	-576
Total, Tech., Trans. & Info. Dissem......	7	720	7	720	—	—	-7	-720
General Administration......	11	1,948	11	1,948	—	—	-11	-1,948
FY 1981 Deferral Reappropriated for FY 1982...........	—	(2,745)[1]	—	—	—	—	—	—
Reimbursable Program:								
U.S./Israel................	(3)	(230)	(3)	(230)	(—)	(—)	(—)	(—)
U.S./Saudi Arabia.........	(8)	(595)	(8)	(595)	(—)	(—)	(—)	(—)
Total, Reim. Prog....	(11)	(825)	(11)	(825)	(—)[2]	(—)[2]	(—)	(—)
TOTAL, APPROPRIATION......	31	10,636	31	13,381	—	—	—	-13,381

Highlights of Budget Changes

	Change from Base	
	FTE/T	Amount
State Water Resources Research Institutes	-3	-5,961

The program of federal support for the 54 State water resources research institutes will be terminated on September 30, 1982. Authorization for these programs under P.L. 95-467, as amended by P.L. 96-457, will expire on that date. FY 1982 funds include $2,745,000 deferred from FY 1981.

Water Research and Development - Reuse	-2	-912

The water resources research development program for water reuse will be terminated on September 30, 1982. Authorization for this program under P.L. 95-467, as amended by P.L. 96-457, will expire on that date.

Saline Water Research	-2	-384

The Saline Water Research program will be terminated on September 30, 1982.

[1] $2,745,000 deferred in FY 1981 available for use in FY 1982 for the State Water Resources Research Institute Program.

[2] The reimbursable program will be transferred to the Bureau of Reclamation in FY 1983 and is covered in the Budget Highlights of the Bureau of Reclamation.

APPROPRIATION: SALARIES AND EXPENSES (Cont'd.)

Highlights of Budget Changes (Contd.)

	Change from Base	
	FTE/T	Amount
Saline Water Development	-6	-3,456
The Saline Water Conversion Development program will be terminated on September 30, 1982. The test facilities at Wrightsville Beach, North Carolina, and Roswell, New Mexico, will be transferred or disposed of at that time. No further federal support will be provided for testing at those sites. Authorization for this program expires on that date.		
Technology Transfer	-2	-144
The OWRT program of technology transfer will be terminated on September 30, 1982. Authorization for this program expires on that date.		
Water Resources Scientific Information Center (WRSIC)	-5	-576
The water resources scientific information center (WRSIC) will be transferred to the Geological Survey and will continue in operation in 1983. No funds are requested under the expiring authorization.		
General Administration	-11	-1,948
No funds will be requested for general administrative support of OWRT programs, which are all being terminated on September 30, 1982.		
International Reimbursable Program	---	---
These programs are totally reimbursed through the Department of the Treasury and the State Department. They will be transferred to the Bureau of Reclamation and continue in FY 1983. They are covered in the Budget Highlights of the Bureau of Reclamation.		

U.S. FISH AND WILDLIFE SERVICE

Conserves, protects and enhances fish and wildlife and their habitats, with principal responsibilities and authority for migratory birds, threatened and endangered species, certain marine mammals, international resources, and wildlife on lands under Service control.

SUMMARY OF BUREAU APPROPRIATIONS

(Dollar amounts in thousands)

Comparison of 1983 Estimate with 1982 Estimate:

	1982 Estimate		1983 Estimate		Change from 1982	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriations:						
Resource Management	5,929	220,350	5,430	218,922	-499	-1,428
Construction	147	6,683	147	12,705	—	+6,022
Land Acquisition	10	16,491	10	1,567	—	-14,924
Migratory Bird Conservation Account - Advance	—	1,200	—	—	—	-1,200
National Wildlife Refuge Fund - Payments in Lieu of Taxes	—	5,760	—	—	—	-5,760
Subtotal, Appropriations	6,086	230,484	5,587	233,194	-499	-17,290
Proposed 1982 Supplementals:						
Fire Supplemental	—	1,800	—	—	—	-1,800
Permanents and Trusts:						
Federal Aid in Fish Restoration	27	36,881	27	40,230	—	+3,349
Federal Aid in Wildlife Restoration	60	108,019	60	118,000	—	+9,981
National Wildlife Refuge Fund	26	4,053	26	4,053	—	—
Migratory Bird Conservation Account	153	16,376	153	16,376	—	—
Proceeds from Sales	1	500	1	500	—	—
Contributed Funds	86	3,442	86	3,750	—	+308
Advances and Reimbursements	621	—	576	—	-45	—
Subtotal, Permanents and Trusts	974	169,271	929	182,909	-45	+13,638
TOTAL, U.S. FISH AND WILDLIFE SERVICE	7,060	421,535	6,516	416,103	-544	-5,432

Comparison of 1983 Estimate with 1983 Base Budget:

	1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriations:						
Resource Management	5,929	225,215	5,430	218,922	-499	-6,293
Construction	147	6,683	147	12,705	—	+6,022
Land Acquisition	10	16,491	10	1,567	—	-14,924
Migratory Bird Conservation Account - Advance	—	1,200	—	—	—	-1,200
National Wildlife Refuge Fund - Payments in Lieu of Taxes	—	5,760	—	—	—	-5,760
Subtotal, Appropriations Requested	6,086	255,349	5,587	233,194	-499	-22,155
Permanents and Trusts	353	169,271	353	182,909	—	+13,638
Advances and Reimbursements	621	—	576	—	-45	—
Subtotal, Permanents and Trusts	974	169,271	929	182,909	-45	+13,638
TOTAL, U.S. FISH AND WILDLIFE SERVICE	7,060	424,620	6,516	416,103	-5[illegible]	-8,517

TABULAR INFORMATION AND HIGHLIGHTS OF BUDGET CHANGES
(By appropriation)

APPROPRIATION: RESOURCE MANAGEMENT

Summary of Requirements

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982	—	—	5,929	220,350
Adjustments to base and built-in changes:				
Adjustment for 1982 pay increase and related costs: 1983 allowance for 1982 pay cost	—	3,363	—	—
Increase in GSA space costs	—	1,704	—	—
Decrease in employee compensation payments	—	-202	—	—
Total, Adjustments to base and built-in changes			—	+4,865
1983 Base Budget			—	225,215
Program changes (Changes to base budget, detailed below)			—	-6,293
Total Requirements (1983 Estimate)			5,929	218,922

APPROPRIATION: RESOURCE MANAGEMENT (Cont'd.)

(Dollar amounts in thousands)

Comparison by Activity/Subactivity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Habitat Preservation:								
Environmental contaminant evaluation	242	9,604	242	9,737	232	8,951	-10	-786
Land/water res. dev. planning	432	12,410	432	12,659	427	11,802	-5	-857
Biological services	200	11,225	200	11,336	182	10,394	-18	-942
Cooperative units	86	4,444	86	4,444	—	—	-86	-4,444
Total, Habitat Preservation	960	37,683	960	38,176	841	31,147	-119	-7,029
Wildlife Resources:								
Migratory birds	1,733	57,583	1,733	58,648	1,703	64,810	-30	+ 6,162
Mammals and nonmigratory birds	490	16,196	490	16,474	490	17,500	—	+ 1,026
Animal damage control	506	15,111	506	15,365	428	13,414	-78	-1,951
Interpretation and recreation	302	10,124	302	10,313	302	11,742	—	+ 1,429
Total, Wildlife Resources	3,031	99,014	3,031	100,800	2,923	107,466	-108	+ 6,666
Fishery Resources	971	36,321	971	37,049	743	32,852	-228	-4,197
Endangered Species	348	17,363	348	17,753	335	16,550	-13	-1,203
General Administration	619	29,369	619	31,437	588	30,907	-31	-530
TOTAL, APPROPRIATION	5,929	220,350	5,929	225,215	5,430	218,922	-499	-6,293

Highlights of Budget Changes

	Change from Base	
	FTE/T	Amount
Environmental contaminant evaluation	-10	-786

Decrease research on biological and physiological indicators of contaminant induced stress in aquatic and terrestrial populations (-201). Discontinue resource and impact assessments of contaminants from minerals mining and smelting activities (-210). Decrease ecological resource assessments of agriculture chemicals used in forest, range, and crop management on fish and wildlife (-375).

Land/water resources development planning	-5	-857

Streamline the permits and licenses review process (-857).

Biological services	-18	-942

Eliminate minerals program (-983). Increase National wetlands inventory mapping capabilities and accelerate the completion date for mapping of high priority wetland areas (+1,141). Streamline participation in Federal, State, and private coal leasing activities (-300). Efficiencies in the distribution of Service technical biological information (-400).

Cooperative units	-86	-4,444

Discontinue Federal funding for the cooperative fish and wildlife research units but encourage state/private funding (-4,444).

Migratory birds	-30	+6,162

Increase minor rehabilitation and cyclical maintenance on existing refuges (+6,414). Increase cyclical maintenance at Patuxent, Md. and Northern Prairie, N.D. Wildlife Research Centers (+1,084). Close the National Wildlife Health Laboratory at Madison, Wis. (-930). Discontinue support

APPROPRIATION: RESOURCE MANAGEMENT (Cont'd.)

Highlights of Budget Changes (cont'd.)

Change from Base: FTE/T Amount

to States for research on migratory and upland game birds (-240). Terminate program to qualify Federal reserved water rights on refuges in western States (-146).

Mammals and nonmigratory birds — +1,026

Increase minor rehabilitation and increased cyclical maintenance on existing refuges (+1,090). Increase cyclical maintenance support at the Denver Wildlife Research Center (+200). Limit scope of research projects on wildlife refuges (-134). Close the National Wildlife Health Laboratory at Madison, Wis. (-130).

Animal damage control -78 -1,951

Decrease predator damage control operations in western areas, and reduce small mammal damage control research necessitating closure of 3 field stations (-1,951).

Interpretation and recreation — +1,429

Strengthen public use programs on refuges and hatcheries (+1,429).

Fishery Resources -228 -4,197

Transfer or close 31 fish hatcheries (-3,676). Increase cyclical maintenance on remaining 58 fish hatcheries (+1,361). Reduce fishery assistance to State of Washington (-288). Eliminate Federal cooperative assistance work with National Park Service, Tennessee Valley Authority; close 12 fishery assistance stations (-567). Reduce fishery research activities including the termination of reservoir research closing 5 research facilities (-1,153). Increase support for comprehensive planning on Alaskan refuges (+409). Management reduction (-283).

Endangered Species -13 -1,203

Decrease surveillance activities involved in the protection of endangered species (-987), undertake only priority recovery efforts for the peregrine falcon (-216).

General Administration -31 -530

Savings resulting from continuing management efficiencies achieved through reduced Federal employment and streamlining organizational structures (-530).

APPROPRIATION: CONSTRUCTION

Summary of Requirements

(Dollar amounts in thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriation current available, 1982	—	—	147	6,683
Adjustments to base and built-in changes:.............	—	—	—	—
1983 Base Budget	—	—	147	6,683
Program changes (Changes to base budget, detailed below)	—	—	—	+6,022
Total Requirements (1983 Estimate)	—	—	147	12,705

Comparison by Activity/Subactivity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Refuges	147	4,903	147	4,903	147	6,607	—	+1,704
Hatcheries	—	503	—	503	—	3,838	—	+3,335
Laboratories	—	655	—	655	—	1,624	—	+969
Dam Safety	—	622	—	622	—	636	—	+14
TOTAL, APPROPRIATION	147	6,683	147	6,683	147	12,705	—	+6,022

Highlights of Budget Changes

FTE/T Amount

Refuges — +6,607

Restore and rehabilitate facilities at national wildlife refuges to ensure employee and public safety and effective wildlife management practices (+6,607).

Hatcheries — +3,838

Complete construction of pollution abatement facilities at 3 national fish hatcheries (+1,883). Initiate major rehabilitation at 5 hatcheries to prevent losses in production capability (+1,955).

APPROPRIATION: CONSTRUCTION (Cont'd.)

Highlights of Budget Changes (Cont'd.)	FTE/T	Amount
Laboratories	—	+1,624
Construction of pollution abatement facilities at 2 fishery research laboratories (+994), and major rehabilitation of water supply system at Patuxent Wildlife Research Center (+630) is scheduled.		
Dam safety	—	+636
The dam safety request implements the Federal guidelines for dam safety of June 25, 1979. The request will fund continued inspections of dams associated with wildlife refuges, fish hatcheries, and research laboratories to identify potential problem areas.		

APPROPRIATION: LAND ACQUISITION

Summary of Requirements (Dollar amounts in thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982	—	—	10	16,491
Adjustments to base and built-in changes:	—	—	—	—
1983 Base Budget	—	—	10	16,491
Program changes (Changes to base budget, detailed below) ...	—	—	—	-14,924
Total Requirements (1983 Estimate)	—	—	10	1,567

Comparison by Activity/Subactivity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Acquisition management	10	997	10	997	10	569	—	-428
Deficiencies and emergency ..	—	150	—	150	—	—	—	-150
Specifically legislated	—	12,960	—	12,960	—	—	—	-12,960
Endangered Species Act	—	1,967	—	1,967	—	998	—	-969
Refuge recreation	—	417	—	417	—	—	—	-417
TOTAL, APPROPRIATION	10	16,491	10	16,491	10	1,567	—	-14,924

Highlights of Budget Changes	FTE/T	Amount
The FY 1983 budget includes $569 for acquisition management, and $998 for acquisition of critical habitat for the endangered Kirtland's Warbler and the American Crocodile. This amount will be used to acquire approximately 600 acres.	—	-14,924

APPROPRIATION: MIGRATORY BIRD CONSERVATION ACCOUNT

Summary of Requirements (Dollar amounts in thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982	—	—	—	1,200
Adjustments to base and built-in changes:	—	—	—	—
1983 Base Budget	—	—	—	1,200
Program changes (Changes to base budget, detailed below) ..	—	—	—	-1,200
Total Requirements (1983 Estimate)	—	—	—	—

Comparison by Activity/Subactivity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Advance appropriation	—	1,200	—	1,200	—	—	—	-1,200

Highlights of Budget Changes	FTE/T	Amount
No advance appropriation has been requested for the FY 1983 budget	—	-1,200

APPROPRIATION: NATIONAL WILDLIFE REFUGE FUND
(Payments in Lieu of Taxes)

Summary of Requirments

(Dollar amounts in thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982	—	—	—	5,760
Adjustments to base and built-in changes:	—	—	—	—
1983 Base Budget	—	—	—	5,760
Program changes (Changes to base budget, detailed below) .	—	—	—	-5,760
Total Requirements (1983 Estimate)	—	—	—	—

Comparison by Activity/Subactivity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Payments to counties	—	5,760	—	5,760	—	—	—	-5,760

Highlights of Budget Changes

No payments in lieu of taxes appropriation has been requested for the FY 1983 budget due to the legislative initiative combining Fish and Wildlife Service requirements into the Bureau of Land Management PILT program.	—	-5,760

NATIONAL PARK SERVICE

Manages, preserves and protects 333 areas comprising the National Park System of the United States and provides for the safe, enjoyable use of these areas by park visitors.

SUMMARY OF BUREAU APPROPRIATIONS

(Dollar amounts in thousands)

Comparison of 1983 Estimate with 1982 Estimate:

	1982 Estimate		1983 Estimate		Change from 1982	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriations:						
Operation of the National Park System....	15,254	512,882	15,011	539,703	-243	+26,821
National Recreation and Preservation.....	337	12,372	193	6,987	-144	-5,385
Construction..............................	698	85,172	698	123,721	---	+38,549
John F. Kennedy Center for the Performing Arts..............................	106	4,162	101	3,986	-5	-156
Urban Park and Recreation Fund...........	---	7,680	22	---	+22	-7,680
Land Acquisition..........................	284	103,462	190	59,776	-94	-43,686
Historic Preservation Fund...............	---	25,440	24	--	+24	-25,440
Subtotal, Appropriations Requested..	16,679	751,150	16,239	734,173	-440	-16,977
Proposed 1982 Supplementals:						
Forest Fire Suppression and Rehabilitation of Burned Areas..................	---	2,200	---	---	---	-2,200
Permanents and Trusts:						
Miscellaneous Permanent.................	2	405	2	405	---	---
Miscellaneous Trust Funds................	21	1,764	21	1,700	---	-64
Subtotal, Permanents and Trust......	23	2,169	23	2,105	---	-64
Other (Transfers and Reimbursables):	537	---	536	---	-1	---
Permanent Contract Authority:	---	30,000	---	---	---	-30,000
TOTAL, NATIONAL PARK SERVICE........	17,239	785,519	16,798	736,278	-441	-49,241

Comparison of 1983 Estimate with 1983 Base Budget:

	1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriations:						
Operation of the National Park System....	15,313	524,619	15,011	539,703	-302	+15,084
National Recreation and Preservation.....	295	8,850	193	6,987	-102	-1,863
Construction..............................	698	85,172	698	123,721	---	+38,549
John F. Kennedy Center for the Performing Arts..............................	106	4,197	101	3,986	-5	-211
Urban Park and Recreation Fund...........	---	7,680	22	---	+22	-7,680
Land Acquisition..........................	267	99,869	190	59,776	-77	-40,093
Historic Preservation Fund...............	---	25,440	24	---	+24	-25,440
Subtotal, Appropriations Requested..	16,679	755,827	16,239	734,173	-440	-21,654
Permanents and Trust Funds						
Miscellaneous Permanent.................	2	405	2	405	---	---
Trust Funds...............................	21	1,764	21	1,700	---	-64
Subtotal, Permanents and Trusts.....	23	2,169	23	2,105	---	-64
Other(Transfers and Reimbursables)..	537	---	536	---	-1	---
TOTAL, NATIONAL PARK SERVICE........	17,239	757,996	16,798	736,278	-441	-21,718

TABULAR INFORMATION AND HIGHLIGHTS OF BUDGET CHANGES
(By appropriation)

APPROPRIATION: OPERATION OF THE NATIONAL PARK SYSTEM

Summary of Requirements

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			15,254	312,882
Adjustments to base and built-in changes:				
Fiscal 1983 allowance for fiscal 1982 pay cost	--	+6,596		
Employee compensation payment	--	+506	--	
GSA space rental	--	+3,421		
Transfer from Land and Water Conservation Fund, Administrative Expenses:	--			
General administration	+17	+1,673		
Transfer from National Recreation and Preservation:				
General administration	+67	+2,010		
Public affairs activity	+8	+250		
Transfer from Land Acquisition		+1,920		
Transfer to National Recreation and Preservation:				
Rivers and Trails	-33	-967		
Transfer Authority to the Department of Transportation, National Visitor Center	--	-3,672		
Total, Adjustments to base and built-in changes			+59	+11,737
1983 Base Budget			15,313	324,619
Program changes (Changes to base budget, detailed below)			-302	+15,084
Total Requirements (1983 Estimate)			15,011	339,703

Comparison by Activity/Subactivity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Park Management:								
Management of Park Areas	2,418	62,173	2,426	53,324	2,346	54,167	-80	+843
Concession Management	75	2,459	75	2,492	82	2,894	+7	+402
Interpretation and Visitor Services	2,005	58,428	2,005	59,164	1,991	59,009	-14	-135
Visitor Protection and Safety	2,847	59,839	2,847	61,068	2,879	64,459	+32	+3,391
Maintenance	5,141	211,827	5,141	210,490	4,930	217,753	-211	+7,263
Resource Management	1,557	75,460	1,557	76,134	1,578	80,635	+21	+4,501
Information Publications	19	2,832	19	2,839	19	2,957	--	+118
International Park Affairs	10	477	10	484	7	384	-3	-100
Volunteers-in-Parks	--	250	--	250	--	250	--	--
Employee Compensation Payment	--	(2,577)	--	--	--	--	--	--
GSA Space Rental, etc.	--	(7,478)	--	--	--	--	--	--
Total, Park Management	14,072	473,745	14,080	466,245	13,832	482,508	-248	+16,263
Forest Fire Suppression and Rehabilitation of Burned Areas	--	1,152	--	1,152	--	1,200	--	+48
Park Recreation and Wilderness Planning:								
Rivers and Trails	33	967	--	--	--	--	--	--
Water Resources	11	1,451	11	1,458	11	1,518	--	+60
General Management Plans	70	2,213	70	2,246	25	838	-45	-1,408
Total, Park Recreation and Wilderness Planning	114	4,631	81	3,704	36	2,356	-45	-1,348

APPROPRIATION: OPERATION OF THE NATIONAL PARK SYSTEM (Cont'd)

(Dollar amounts in thousands)

Comparison by Activity/Subactivity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Statutory and Contractual Aid:								
Roosevelt Campobello International Park Com...	--	357	--	357	--	394	--	+37
Ice Age NSR..............	--	564	--	564	--	588	--	+24
Lowell Historic Preservation Commission..........	12	384	12	391	12	407	--	+16
Folger Theater, Maintenance	--	288	--	288	--	--	--	-288
Corcoran Gallery, Maintenance	--	288	--	288	--	--	--	-288
FALLS OF CLYDE............	--	48	--	48	--	--	--	-48
Ozette Village............	--	19	--	19	--	--	--	-19
Total, Statutory and Contractual Aid........	12	1,948	12	1,955	12	1,389	--	-566
General Administration:								
Central Office............	186	4,710	225	6,503	225	6,398	--	-105
Regional Office...........	672	13,333	710	15,553	703	15,801	-7	+248
Automatic Data Processing.	43	3,296	50	3,964	50	4,128	--	+164
Servicewide Administrative Support.................	--	4,072	--	5,308	--	5,530	--	+222
Employees' Compensation Payment..................	--	--	--	3,083	--	3,083	--	--
GSA Space Rental..........	--	--	--	10,899	--	10,899	--	--
Executive Direction.......	155	5,995	155	6,253	153	6,411	-2	+158
Total, General Administration...............	1,056	31,406	1,140	51,563	1,131	52,250	-9	+687
TOTAL, APPROPRIATION......	15,254	512,882	15,313	524,619	15,011	539,703	-302	+15,084

Highlights of Budget Changes

Operation of the National Park System:	Change from Base	
	FTE/T	Amount
Management of park areas Restoration of program reduction sustained in fiscal 1982 to annualize 1982 pay increase and related cost. Park support and professional services are being reduced in Regional and Washington Offices.	-80	+843
Concessions Management Provides increase to enhance concessions management programs in order to provide more timely and effective review and evaluation of concessions operations in parks, and restoration of program reduction sustained in fiscal 1982.	+7	+402
Interpretation and Visitor Services Decreases for in-park transportation systems and performing arts in the Nation's Capital partially offset by increases to restore programs curtailed due to inflation and to improve interpretive and informational programs and restoration of 1982 budget reduction.	-14	-155
Visitor Protection and Safety Provides increases to augment visitor protection and law enforcement activities, restore programs which have been curtailed due to inflationary pressures on operating budgets and restoration of 1982 budget reduction.	+32	+3,391
Maintenance Upgrade routine maintenance activities and cover cost increases in supplies, materials, and contractual services in order to maintain the current level of activity, and restoration of 1982 budget reduction.	-211	+7,263

APPROPRIATION: OPERATION OF THE NATIONAL PARK SYSTEM (Cont'd.)

Highlights of Budget Changes (Cont'd.)

	Change from Base	
	FTE/T	Amount
Resources Management	+21	+4,501
Provides increases to conduct important research, monitoring and management programs for the protection and preservation of park natural and cultural resources, including $0.6 million to expand the Service's research activities on the effects of acid rain and restoration of 1982 budget reduction.		
Information Publications	--	+118
Restoration of program reduction sustained in fiscal 1982 and for annualization of the 1982 pay increase and related cost.		
International Park Affairs	-3	-100
Reduces international assistance and cooperative programs.		
Forest Fire Suppression and Rehabilitation of Burned Areas	--	+48
Restoration of program reductions sustained in fiscal 1982.		
Water Resources	--	+60
Restoration of program reduction sustained in fiscal 1982 and for annualization of the 1982 pay increase and related cost.		
General Management Plans	-45	-1,408
Reduce program outputs approximately 50 percent. Planning will center on those areas with a legislatively mandated completion date for submission of a general management plan to Congress.		
Roosevelt Campobello International Park Commission	--	+37
Restoration of program reduction sustained in fiscal 1982 and increase for the United States' share of operating costs.		
Ice Age National Scientific Reserve	--	+24
Restoration of program reduction sustained in fiscal 1982.		
Lowell Historic Preservation Commission	--	+16
Restoration of program reduction sustained in fiscal 1982 and for annualization of the 1982 pay increase and related cost.		
Folger Theater	--	-288
Corcoran Gallery	--	-288
The Administration has consistently taken the position that such private institutions should be supported by private contributions rather than receiving direct Federal Assistance.		
FALLS OF CLYDE	--	-48
Eliminate assistance to the Bishop Museum for the maintenance of this historic vessel.		
Ozette Village	--	-19
Eliminates support to the Makah Indian Tribe for protection and interpretation of the Ozette Village archeological site.		

Highlights of Budget Changes (Cont'd.)

	Change from Base FTE/T	Change from Base Amount
Central Office	--	-105
Proposed decreases in the National Recreation and Preservation programs will reduce the need for related administrative support. This decrease is partially offset by restoration of the 1982 budget reduction.		
Regional Office	-7	+248
Restoration of program reductions sustained in fiscal 1982 and for annualization of the 1982 pay increase and related cost.		
Automatic Data Processing	--	+164
Restoration of program reduction sustained in fiscal 1982 and for annualization of the 1982 pay increase and related cost.		
Servicewide Administration Support	--	+222
Restoration of program reductions sustained in fiscal 1982.		
Executive Direction	-2	+158
Restoration of program reductions sustained in fiscal 1982 and for annualization of 1982 pay increase and related cost.		

APPROPRIATION: NATIONAL RECREATION AND PRESERVATION

Summary of Requirements

(Dollar amounts in thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			337	12,372
Adjustments to base and built-in changes:				
Fiscal 1983 allowance for fiscal 1982 pay cost		+81		
Transfer from Operation of the National Park System:				
Rivers and Trails	+33	+967		
Transfer to Operation of the National Park System:				
General administration	-67	-4,320		
Public affairs activity	-8	-250		
Total, Adjustments to base and built-in changes			-42	-3,522
1983 Base Budget			295	8,850
Program changes (Changes to base budget, detailed below)			-102	-1,863
Total Requirements (1983 Estimate)			193	6,987

Comparison by Activity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Recreation Program:	58	2,552	45	1,609	25	1,009	-20	-600
Natural Program:	70	1,110	90	1,678	63	1,173	-27	-505
Cultural Program:	125	5,828	97	3,625	89	4,425	-8	+800
Environmental Compliance Review:	22	578	17	365	16	380	-1	+15
Grant Administration:	62	2,304	46	1,573	--	--	-46	-1,573
TOTAL, APPROPRIATION	337	12,372	295	8,850	193	6,987	-102	-1,863

APPROPRIATION: NATIONAL RECREATION AND PRESERVATION (Cont'd.)

Highlights of Budget Changes

	Change from Base FTE/T	Change from Base Amount
Recreation Program	-20	-600
Reduce services to State and local governments, eliminate demonstration projects and consultation or advisory services, partially offset by restoration of 1982 budget reduction.		
Natural Programs	-27	-505
Eliminate the new area designation program relating to the National Wild and Scenic Rivers and National Historic and Scenic Trails Systems. The Service will continue to complete studies of those rivers and trails routes specifically designated by Congress. This decrease is partially offset by the restoration of the 1982 budget reduction.		
Cultural Programs	-8	+800
This increase will help meet the additional workload resulting from the Administration's enhancement of tax incentives for historic preservation and the elimination of the Historic Preservation Fund grants that provided support for State historic preservation staff; staffs that have handled some of this workload and restoration of program reductions sustained in fiscal 1982 to annualize pay costs.		
Environmental Compliance and Review	-1	+15
Restoration of program reduction sustained in fiscal 1982 for annualization of 1982 pay increase and related cost.		
Grant Administration	-46	-1,573
No new budget authority is requested to administer the closeout of the Urban Park and Recreation Fund and the Historic Preservation Fund grant programs in fiscal 1983. The Service proposes to provide funds necessary for this function by deferring funds from each respective grant program to fiscal 1983.		

APPROPRIATION: CONSTRUCTION

Summary of Requirements

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			698	85,172
Adjustments to base and built-in changes:				
1983 Base Budget			698	85,172
Program changes (Changes to base budget, detailed below)			--	+38,549
Total Requirements (1983 Estimate)			698	123,721

Comparison by Activity

	1982 Appropriation FTE/T	1982 Appropriation Amount	1983 Base Budget FTE/T	1983 Base Budget Amount	1983 Estimate FTE/T	1983 Estimate Amount	Change from Base FTE/T	Change from Base Amount
Construction, Line Item:	698	68,826	698	68,826	698	107,507	--	+38,681
Emergency and Unscheduled Projects:	--	2,880	--	2,880	--	3,000	--	+120
Advance Planning:	--	4,800	--	4,800	--	5,000	--	+200
Project Planning:	--	8,666	--	8,666	--	8,214	--	-452
TOTAL, APPROPRIATION	698	85,172	698	85,172	698	123,721	--	+38,549

APPROPRIATION: CONSTRUCTION (Cont'd.)

Highlights of Budget Changes

	Change from Base FTE/T	Change from Base Amount
Line Item Construction The line item construction program contains increases which represent the continuation of the park restoration and improvement program in fiscal 1983. This initiative will allow the Service to begin restoring and improving park facilities which have deteriorated due to the cumulative effects of age, heavy usage and deferred maintenance. For fiscal 1983, 46 construction projects are being proposed in 43 park areas. All projects address existing deficiencies or serious resource protection problems.	--	+38,681
Emergency and Unscheduled Projects The request for emergency and unscheduled projects represents funding needed annually to meet unanticipated repair needs throughout the National Park System. The amount requested represent a restoration of the 4 percent reduction contained in fiscal 1982 appropriation language.	--	+120
Advance Planning The advance planning request represents a restoration of the 4 percent reduction contained in the fiscal 1982 appropriation. The proposed level will adequately support the Service's construction-related planning needs.	--	+200
Project Planning The request for project planning represents the Service's best professional estimate of the level of funding required to prepare preliminary and final construction drawings and specifications needed to support future year construction. This reduced funding level will meet the requirements of the park restoration and improvement program initiative as well as the regular construction program.	--	-452

APPROPRIATION: JOHN F. KENNEDY CENTER FOR THE PERFORMING ARTS

Summary of Requirements

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			106	4,142
Adjustments to base and built-in changes:				
Fiscal 1983 allowance for fiscal 1982 pay cost	--	+55		
Total, Adjustments to base and built-in changes			--	55
1983 Base Budget			106	4,197
Program changes (Changes to base budget, detailed below)			-5	-211
Total Requirements (1983 Estimate)			101	3,986

Comparison by Activity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
John F. Kennedy Center for the Performing Arts:	106	4,142	106	4,197	101	3,986	-5	-211

Highlights of Budget Changes

	Change from Base FTE/T	Change from Base Amount
John F. Kennedy Center for the Performing Arts The National Park Service currently shares the cost of building maintenance, housekeeping, and administration with the Center Board of Trustees. The reduced level of Federal support requested for fiscal 1983 assumes that the cost sharing formula (currently 76.2 percent, National Park Service and 23.8 percent, Board of Trustees) will be renegotiated, following recommendations by the General Accounting Office, to reduce the portion paid by the National Park Service to 70.0 percent.	-5	-211

APPROPRIATION: URBAN PARK AND RECREATION FUND

Summary of Requirements

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			--	7,680
Adjustments to base and built-in changes:				
NONE				
1983 Base Budget				7,680
Program changes (Changes to base budget, detailed below)			+22	-7,680
Total Requirements (1983 Estimate)			22	--

Comparison by Activity/Subactivity

(Dollar amounts in thousands)

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Urban Park and Recreation Fund:	--	7,680	--	7,680	22	--	+22	-7,680

Highlights of Budget Changes

	Change from Base	
	FTE/T	Amount
Urban Park and Recreation Fund	+22	-7,680

No new budget authority is requested for Federal grants to support local recreation improvements. The Service proposes to provide funds necessary for personnel to administer the closeout of this grant program by deferring 1982 funds to fiscal 1983.

APPROPRIATION: LAND ACQUISITION

Summary of Requirements

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			284	103,462
Adjustments to base and built-in changes:				
Transfer common program services to General Administration, Operation of the National Park System from Assistance to States, Administrative expenses, and NPS Land Acquisition	-17	-3,593		
Total, Adjustments to base and built-in changes			-17	-3,593
1983 Base Budget			267	99,869
Program change (Changes to base budget, detailed below)			-77	-40,093
Total Requirements (1983 Estimate)			190	59,776

Comparison by Activity/Subactivity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Assistance to States, Administrative expenses:	71	4,381	54	2,708	56	--	+2	-2,708
Acquisition:	--	85,040	--	83,120	--	55,400	--	-27,720
Administrative Expenses:	210	8,160	210	8,160	131	4,250	-79	-3,910
Pinelands National Reserve:	3	5,881	3	5,881	3	126	--	-5,755
TOTAL, APPROPRIATION	284	103,462	267	99,869	190	59,776	-77	-40,093

Highlights to Budget Changes

	Change from Base	
	FTE/T	Amount
Assistance to States, Administrative Expenses	+2	-2,708

No new budget authority is requested for administrative expenses to administer grants to States. The Service proposes to provide funds necessary for personnel to administer the closeout of this grant program by deferring 1982 funds to fiscal 1983.

Acquisitions	--	-27,720

No new land acquisition is proposed. This reduced level provides funds for deficiency court awards and emergency acquisitions.

APPROPRIATION: LAND ACQUISITION (Cont'd.)

Highlights to Budget Changes (Cont'd.)

	Change from Base	
	FTE/T	Amount
Administrative Expenses	-79	-3,910

The decrease in administrative expenses provides funds to administer the reduced acquisition program.

Pinelands National Reserve	--	-5,735

Decrease acquisition and provide funding for technical assistance for planning.

APPROPRIATION: HISTORIC PRESERVATION FUND

Summary of Requirements

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			--	25,440
Adjustments to base and built-in changes:				
NONE	--	--		
1983 Base Budget				25,440
Program changes (Changes to base budget, detailed below)			+24	-25,440
Total Requirements (1983 Estimate)			24	--

Comparison by Activity/Subactivity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Grants-in-Aid:	--	21,024	---	21,024	24	--	+24	-21,024
National Trust:	--	4,416	--	4,416		--		-4,416
TOTAL, APPROPRIATION	--	25,440	--	25,440	24	--	+24	-25,440

Highlights of Budget Changes

	Change from Base	
	FTE/T	Amount
Historic Preservation Fund	+24	-25,440

No new budget authority is requested for Federal grants to States or to the National Trust for Historic Preservation. The Service proposes to provide funds necessary for personnel to administer the closeout of this grant program by deferring 1982 funds to fiscal 1983.

U.S. GEOLOGICAL SURVEY

The Geological Survey provides basic scientific data and maps concerning water, land, and mineral resources. The Geological Survey's 1983 budget includes $128.3 million for the supervison of mineral leases and royalty collection on Federal, Indian, and Outer Continental Shelf Lands. On January 19, 1982, the management of this activity was assigned to the new Minerals Management Service reporting directly to the Under Secretary and an executive group within the Office of the Secretary.

SUMMARY OF BUREAU APPROPRIATIONS

Comparison of 1983 Estimates with 1982 Estimate:

(Dollar amounts in thousands)

	1982 Estimate		1983 Estimate		Change from 1982	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriations:						
Surveys, Investigations, and Research	10,822	494,545	10,304	507,577	-518	+13,032
Exploration of National Petroleum Reserve in Alaska	15	2,196	—	—	-15	-2,196
Barrow Area Gas-Operation Exploration and Development	—	—	15	6,400	+15	+6,400
Subtotal	10,837	496,741	10,319	513,977	-518	+17,236
Legislative Program:						
Digital Cartography	(92)	(3,873)[1]	92	3,873	+92	+3,873
Reimbursements	2,289	—	2,205	—	-84	—
TOTAL, U.S. GEOLOGICAL SURVEY	13,126	496,741	12,616	517,850	-510	+21,109

[1] Amounts included in Surveys, Investigations and Research appropriation

Comparison of 1983 Estimate with 1983 Base Budget:

	1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriations:						
Surveys, Investigations, and Research	10,730	507,312	10,304	507,577	-426	+265
Barrow Area Gas-Operation Exploration and Development	15	2,196	15	6,400	—	+4,204
Subtotal-Approp. Requested	10,745	509,508	10,319	513,977	-426	+4,469
Legislative Program:						
Digital Cartography	92	3,873	92	3,873	—	—
Reimbursements	2,289	—	2,205	—	-84	—
TOTAL, U.S. GEOLOGICAL SURVEY	13,126	513,381	12,616	517,850	-510	+4,469

TABULAR INFORMATION and HIGHLIGHTS OF BUDGET CHANGES
(By appropriation)

APPROPRIATION: SURVEYS, INVESTIGATIONS, AND RESEARCH

Summary of Requirements

(Dollar amounts in thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			10,822	494,343
Adjustments to base and built-in changes				
FY 1983 Allowance for 1982 pay cost	—	+7,060		
FY 1983 Allowance for Standard Level User Charge Increases	—	+7,915		
Employee compensation	—	+465		
Transfer from National Science Foundation[1]	—	+1,200		
Transfer of Digital Cartography to separate account	-92	-3,873	-92	+12,767
Summary of program activity level adjustments made in arriving at the General Administration activity level:				
National Mapping, Geography and Surveys	-44	-2,226		
Geologic and Mineral Resource Surveys and Mapping	-111	-4,829		
Water Resources Investigations	-48	-3,539		
Conservation of Lands and Minerals	-128	-4,061		
Earth Sciences Applications	-12	-365		
Subtotal			-343	-15,020
Adjustment to General Administration			+343	+15,020
Total, Adjustments to base and built-in changes			-92	+12,767
1983 Base Budget			10,730	507,312
Program Changes			-426	+265
Total Requirements (1983 Estimate)			10,304	507,577

Comparison by Activity/Subactivity

	1982 Estimate		1983 Base Budget		1983 Estimates		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
National Mapping, Geography and Surveys:								
Primary quadrangle mapping	946	37,488	920	37,305	894	36,865	-26	-440
Map rev. & orthophotoquads	479	16,030	466	16,011	476	16,761	+10	+750
Digital mapping	89	3,873	—	—	—	—	—	—
Small, intermediate & special mapping	287	15,200	281	15,066	269	13,016	-12	-2,050
Cartographic & geographic information	98	3,756	96	3,806	96	3,806	—	—
Total	1,899	76,347	1,763	72,188	1,735	70,448	-28	-1,740
Geologic and Mineral Resource Surveys and Mapping:								
Geologic hazards surveys	770	48,008	744	48,655	705	43,455	-39	-5,200
Land resource surveys	388	16,204	374	16,235	374	16,735	—	+500
Mineral resource surveys	790	38,749	761	38,560	777	40,860	+16	+2,300
Energy geologic surveys	809	37,582	781	37,642	641	29,982	-140	-7,660
Offshore geologic surveys	436	20,953	422	20,739	422	21,789	—	+1,050
Total	3,193	161,496	3,082	161,831	2,919	152,821	-163	-9,010
Water Resources Investigations:								
Nat'l water data system:								
Federal program	1,371	47,298	1,349	47,506	1,296	53,006	-53	+5,500
Fed.-State coop program	1,462	44,220	1,440	43,664	1,387	44,164	-53	+500
Energy hydrology	270	15,341	266	15,345	252	14,845	-14	-500
Total	3,103	106,859	3,055	106,515	2,935	112,015	-120	+5,500

[1] Funding for earthquake studies previously financed from NSF's Research and related activities account.

Comparison by Activity/Subactivity (Cont'd.)

	1982 Estimate		1983 Base Budget		1983 Estimates		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Conservation of Lands and Minerals:1/								
OCS Lands	931	65,159	881	63,929	849	66,684	-32	+2,755
Federal & Indian lands ...	957	41,603	902	41,424	863	39,924	-39	-1,500
Royalty management	386	15,523	363	15,134	329	21,894	-34	+6,760
Total	2,274	122,285	2,146	120,487	2,041	128,502	-105	+8,015
Earth Sciences Applications:								
Earth res. observ. syst. ..	121	11,904	111	11,790	111	9,490	—	-2,300
Environmental affairs	41	1,438	41	1,425	41	1,425	—	—
Land res. data applic.	27	833	25	835	16	635	-9	-200
Total	189	14,175	177	14,050	168	11,550	-9	-2,500
General Administration:								
Executive Direction	118	2,427	115	6,200	115	6,200	—	—
Administrative Operations .	—	—	346	11,287	346	11,287	—	—
Employee compensation	—	882	—	1,347	—	1,347	—	—
Total	118	3,309	461	18,834	461	18,834	—	—
Facilities:								
National Center - SLDC	—	8,467	—	11,784	—	11,784	—	—
National Center - Fac. Mgmt.	46	1,607	46	1,623	45	1,623	-1	—
Total	46	10,074	46	13,407	45	13,407	-1	—
TOTAL, APPROPRIATION ..	10,322	494,545	10,730	507,312	10,304	507,577	-426	+265

Highlights of Budget Changes

	Change from Base	
	FTE/T	Amount
Primary Quadrangle Mapping	-25	$ -440

This decrease will reduce the annual production of 7.5-minute, 1:24,000 scale topographic maps extending the time when complete coverage of the Nation is attained.

Map Revision and Orthophotoquads	+10	+750

This increase will allow the expansion of the revision program to accommodate the increasing need to completely revise maps in urban areas which were originally mapped in the first half of the century by methods that do not meet current standards.

Small, Intermediate, and Special Mapping	-12	-2,050

The Airborne Profiling of Terrain System decrease is a normal reduction in the phased development of the prototype system scheduled for application testing in FY 1983. The production of land-use land-cover maps will be reduced.

Geologic Hazards Surveys	-39	-5,200
Earthquake Hazards Reduction	(-16)	(-2,600)

This reduction will be taken in laboratory research and studies relevant to earthquake prediction.

Volcano Hazards	(-23)	(-2,600)

This reduction will terminate all volcano monitoring in Alaska, reduce the level of monitoring of Cascade Volcanoes and cut back volcano eruption research studies.

1/ Funding for activities now being managed by the Minerals Management Service.

	Change from Base FTE/T	Change from Base Amount
Land Resource Surveys	—	+500
Geologic Framework	(—)	(+500)
For increased geologic mapping in areas where geologic information is needed to support mission programs such as Strategic/Critical Minerals.		
Mineral Resource Surveys	+16	+2,300
Alaskan Mineral Resource Appraisal Program	(—)	(+500)
To assure timely implementation of Alaska Lands Act of 1980.		
Conterminous United States Minerals Appraisal Program	(—)	(+500)
Goal of this program is to provide for a systematic mineral resource appraisal of mineralized areas of the United States. This increase will provide for a CUSMAP start early in FY 1983 in an area of high mineral potential.		
Strategic/Critical Minerals	(+16)	(+1,300)
To conduct an accelerated program of applied and basic geologic research to assist in the development of new deposits of strategic minerals.		
Energy Geologic Surveys	-140	-7,660
Coal Investigations	(+11)	(+1,500)
The increase will be used to provide information and analysis needed to implement the Secretary's program for the development of coal resources on Federal lands.		
Oil Shale Investigations	(-22)	(-1,500)
This reduction reflects a decreased emphasis on government-funded studies for this resource.		
Geothermal Investigations	(-36)	(-1,900)
This decrease will delay the completion of an assessment of the geothermal potential of the Cascades, postpone the initiation of a new assessment of the Northern Great Basin and eliminate geopressure resource studies of the Gulf Coast region.		
Uranium/Thorium Investigations	(-81)	(-4,800)
The decrease reflects the reduced emphasis on government-funded research on this energy source.		
World Energy Assessment	(-12)	(-960)
No direct funding is proposed for this program.		
Offshore Geologic Surveys	—	+1,050
The increase will be used to provide information and analysis needed to implement the Secretary's program for the assessment and safe development of oil and gas resources of the United States continental margin and slope.		

APPROPRIATION: SURVEYS, INVESTIGATIONS, AND RESEARCH (Cont'd.)

	Change from Base FTE/T	 Amount
National Water Data System - Federal Program	-53	+5,500
Data Collection and Analysis - Federal Program	(-24)	(+1,000)
The increase will provide for improving the hydrologic data network with additional data collection stations in strategic locations; safety maintenance on selected stations; and intensified analyses and evaluation of surface water, ground water, and water quality data and information.		
Toxic Wastes - Ground Water Contamination	(-1)	(+3,500)
The increase will provide for additional hydrologic investigations and wider scope for the program to develop information and techniques for preventing and mitigating ground-water contamination; and to provide technical support to Federal and State officials faced with making decisions about underground disposal of toxic wastes.		
Acid Rain	(-1)	(+1,000)
The increase will provide for expansion of the ongoing program to determine the amount, character and variability of atmospheric deposition nationwide; and to study the effects of acid rain on the water, land, and subsurface environment.		
Other Federal Program Elements	(-27)	(—)
Personnel reduction made possible through administrative efficiencies.		
Federal/State Coop Program	-53	+500
Coal Hydrology	(-4)	(—)
Personnel reduction made possible through administrative efficiencies.		
Data Collection and Analysis, Areal Appraisals, and Special Studies	(-49)	(+500)
Additional water-quality studies of the highest priority, including river quality assessments will be conducted in the Federal/State Cooperative Program.		
Energy Hydrology - Federal	-14	-500
Coal Hydrology - Federal Program	(-5)	(-500)
Data collection at a number of hydrologic stations, some areal appraisals, and some research will be reduced.		
Other Energy Hydrology Program Elements	(-9)	(—)
Personnel reduction made possible through administrative efficiencies.		
Outer Continental Shelf Lands	-32	+2,755
Regulation of OCS Oil and Gas Operations	(-4)	(+1,000)
The exploration and development of new OCS areas will require increased efforts in enforcement and compliance, training, and accident investigations.		
OCS Reservoir Shut-in/Efficient Operations	(-25)	(-1,845)
The current Reservoir Shut-In Program has not identified significant opportunities for additional oil and gas production to date. The program will therefore be terminated and the funds redirected to the Reserve Inventory of Oil and Gas Program.		
Area Identification and Evaluation	(-3)	(+1,000)
The increase will allow the conduct of responsibilities, including the collection and analysis of the oil and gas resource data, associated with a rapidly accelerating and expanding OCS leasing program.		

APPROPRIATION: SURVEYS, INVESTIGATIONS, AND RESEARCH (Cont'd.)

	Change from Base	
	FTE/T	Amount
Reserve Inventory of OCS Oil and Gas	(—)	(+2,600)
The increase will be used to enhance the maintenance of current reserve estimates as reserves are reduced by production and increased through reservoir extensions and the discovery of new fields; and to redesign the computerized storage and retrieval system to provide up-to-date reserve estimates.		
Federal and Indian Lands	-39	-1,500
Oil and Gas Program	(—)	(+1,500)
This increase will allow more frequent and thorough inspections of producing wells and related treatment facilities while conducting random inspections aimed at reducing the unauthorized removal of oil from Federal and Indian leases.		
Coal Program	(-39)	(-3,000)
The proposed decrease in the Coal Program will substantially reduce government drilling for delineation of lease tracts for competitive coal lease sales and place more reliance on data acquired by industry under exploration licenses or data which is available from other sources to determine Fair Market Value.		
Royalty Management	-34	+6,760
This increase will allow the continued development of a mineral lease Production Accounting and Audit System (PAAS) initiated in FY 1982. The development of PAAS follows initiation of an automated Audit and Financial System (AFS) which will be developed and tested during FY 1982 and operated in parallel with the Interim Operating System installed as a bridge between the existing and newly developed programs. As royalty collections are consolidated into one location under the AFS, the staffing necessary to operate the old system will decrease by 55 while requirements for the new system increase by 21, resulting in a net decrease of 34. The FY 1983 increase in budget authority will provide primarily for contractual support to continue developing the computerized production accounting system which will become fully operational in FY 1984 and to begin the conversion of industry payor reporting to the PAAS.		
Earth Resources Observation Systems	—	-2,300
The decrease reflects a reduction for Landsat data processing, archiving, cataloging, and distribution since the National Oceanic and Atmospheric Administration (Department of Commerce) will provide funds in their FY 1983 budget to reimburse the Geological Survey for these services.		
Land Resource Data Applications	-9	-200
The decrease will reduce: 1) workshops, and other outreach activities; 2) studies on applying earth science information to various State and local decision-making processes; and 3) technical information transfer activities.		

APPROPRIATION: EXPLORATION OF NATIONAL PETROLEUM RESERVE IN ALASKA

Summary of Requirements

(Dollar amounts in thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982 ...	—	—	15	2,196
Adjustments to base and built-in changes				
Transfer to Barrow Area Gas appropriation account	-15	-2,196		
Total, Adjustments to base and built-in changes			-15	-2,196
1983 Base Budget			—	—
Program changes			—	—
Total Requirements (1983 Estimate)			—	—

Comparison by Activity/Subactivity

	1982 Estimate		1983 Base Budget		1983 Estimate		Change From Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Barrow Area Gas Operation, Exploration, and Development	15	2,196	—	—	—	—	—	—
Total Requirements	15	2,196	—	—	—	—	—	—

APPROPRIATION: BARROW AREA GAS OPERATION, EXPLORATION, AND DEVELOPMENT

Summary of Requirements

(Dollar amounts in thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982 ..			—	—
Adjustments to base and built-in changes				
Transfer from National Petroleum Reserve in Alaska	+15	+2,196		
Total, Adjustments to base and built-in changes			+15	+2,196
1983 Base Budget			15	2,196
Program changes			—	+4,204
Total Requirements (1983 Estimate)			15	6,400

Comparison by Activity/Subactivity

	1982 Estimate		1983 Base Budget		1983 Estimate		Change From Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Barrow Area Gas Operation, Exploration, and Development	—	—	15	2,196	15	6,400	—	+4,204
Total Requirements	—	—	15	2,196	15	6,400	—	+4,204

Highlights of Budget Changes

Barrow Area Gas Operations, Exploration and Development The increase of $4,204,000 is requested to fund the full cost of providing a stand-alone base camp for operation and maintenance of the Barrow gas fields during FY 1983.	—	+4,204

APPROPRIATION: DIGITAL CARTOGRAPHY

Summary of Requirements

(Dollar amounts in thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982 ..			—	—
Adjustments to base and built-in changes:				
Transfer from Surveys, Investigations, and Research	+92	+3,373		
Total adjustments to base and built-in changes			+92	+3,373
1983 Base Budget			92	3,373
Program changes			—	—
Total Requirements (1983 Estimate)			92	3,373

Comparison by Activity/Subactivity

	1982 Estimate		1983 Base Budget		1983 Estimate		Change From Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Digital Cartography	—	—	92	3,873	92	3,873	—	—
Total Requirements	—	—	92	3,873	92	3,873	—	—

Highlights of Budget Changes

Digital Cartography — —

This new proposed appropriation is a transfer of $3,873,000 from the Digital Mapping Program previously funded through Surveys, Investigations, and Research. The Geological Survey currently has the authority to conduct a digital cartography program but legislation is being proposed to establish a revolving fund that would eventually finance the program through receipts.

The Office of Surface Mining (OSM) administers Federal programs under Public Law 95-87 for the regulation of coal mining operations to protect the environment. It also administers programs for reclaiming lands damaged by past mining activity. The Office reviews, monitors, and assists States in accomplishing these and other objectives of the Act. Financial assistance is provided to the States for their regulatory and reclamation programs, and to small mining operators for securing the data analysis required for mine permit applications. Evaluation of State regulatory programs assures compliance with the law and enforcement of applicable regulatory standards. In the few States where approved State programs are not expected to be in effect, the Office carries out direct Federal regulatory and reclamation activities.

SUMMARY OF APPROPRIATIONS

Comparison of 1983 Estimate with 1982 Estimate:

(Dollar amounts in thousands)

	1982 Appropriation		1983 Estimate		Change from 1982	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriations:						
Regulation & Technology.........	566	58,515	525	62,173	-41	+3,658
Abandoned Mine Reclamation Fund.	328	102,082	262	97,649	-66	-4,433
Subtotal, Appropriations.......	894	160,597	787	159,822	-107	-775
TOTAL, OFFICE OF SURFACE MINING	894	160,597	787	159,822	-107	-775

Comparison of 1983 Estimate with 1983 Base Budget:

	1983 Base		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriations:						
Regulation & Technology.........	566	62,903	525	62,173	-41	-730
Abandoned Mine Reclamation Fund.	328	98,342	262	97,649	-66	-693
Subtotal, Appropriations.......	894	161,245	787	159,822	-107	-1,423
TOTAL, OFFICE OF SURFACE MINING	894	161,245	787	159,822	-107	-1,423

1/ Adjusted to reflect General Administration financing entirely within the Regulation and Technology account.

TABULAR INFORMATION AND HIGHLIGHTS OF BUDGET CHANGES
(By Appropriation)

APPROPRIATION: REGULATION AND TECHNOLOGY

Summary of Requirements

(Dollar amounts in Thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982...			658	58,515
Adjustments to base and built-in changes:				
Adjustment for General Administration charge from AML Appropriation...............................	--	+3,960		
Full-year cost in 1983 of positions financed for part year in 1982................................		428		
Total, Adjustments to base and built-in changes.....			--	+4,388
1983 Base Budget...			658	62,903
Program Changes..			-133	-730
Total Requirements (1983 Estimate)......................			525	62,173

APPROPRIATION: REGULATION AND TECHNOLOGY (Cont'd)

Comparison by Activity/Subactivity

(Dollar amounts in thousands)

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
State Regulatory Program Grants.	—	24,432	—	24,432	—	33,400	—	+8,968
Federal Regulatory Programs:								
Program Operations and Inspection..............	346[a]	20,658	346	20,903	225	9,393	-121	-11,510
Technical Support........	102	4,919	102	4,982	150	9,760	+48	+4,778
Subtotal	448	25,577	448	25,885	375	19,153	-73	-6,732
General Administration......	118	8,506	219	12,586[b]	150	9,620	-69	-2,966
TOTAL, APPROPRIATION....	566	58,515	667	62,903	525	62,173	-142	-730

[a] Program Operations and Inspection is derived from the combining of State and Federal ($11,387) and Inspection and Enforcement ($9,271) activities.

[b] Adjusted for transfer of $3,388 from the AML Appropriation for General Administration to reflect General Administration financing entirely within the Regulation and Technology Account.

Highlights of Budget Changes

	Change from Base	
	FTE/T	Amount
State Regulatory Program Grants	—	+8,968

Provides for assistance to States in the development and operation of permanent regulatory programs through matching grants on an 80/60/50 percent basis for the first, second, and all subsequent years. The increased funding for States reflects the higher State costs as they assume regulatory primacy, thereby increasing their workload.

Program Operations & Inspection	-121	-11,510

Provides staff and management for the regulatory program grants activity, for State and Federal regulatory program development and administration, and for State programs including oversight inspection activities. The decrease reflects a shift in program emphasis from Federal interim inspection and enforcement to that of oversight of State regulatory programs, and the transfer of $7,320 and 53 FTE's in the NEPA/Mine Plan Review component from Program Operations and Inspection to Technical Support.

Technical Support	+48	+4,778

Provides technical advice on all aspects of the Federal regulatory program, and technical assistance to State regulatory agencies. Accomplishes Federal coal lease mine plan reviews and repermitting requirements for existing mines. The transfer of the NEPA/Mine Plan Review component ($7,320 and 53 FTE's) from Program Operations and Inspection is partially offset by a decrease resulting from a transfer of resources to the State regulatory grants activity to augment funding for cooperative agreements on Federal lands.

General Administration	-69	-2,966

Includes policy development, program direction and management coordination along with the necessary administrative support systems to allow the effective and efficient accomplishment of the provisions of the Act (SMCRA). Reductions are accomplished through reorganization and a concomitant reduction in staff. The Fiscal Year 1983 base reflects the transfers to Regulation and Technology of General Administration funds assessed against the Abandoned Mine Land account.

APPROPRIATION: ABANDONED MINE RECLAMATION FUND

Summary of Requirements

(Dollar amounts in Thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982..................			236	102,082
Adjustments to base and built-in changes:				
Adjustment for General Administration charge to Regulation and Technology..........................		-3,960		
Full-year cost in 1983 of positions financed for part year in 1982..................................	—	220		
Total, Adjustments to base and built-in changes....			—	-3,[illegible]40
1983 Base Budget..			236	98,342
Program Changes...			+26	-693
Total Requirements (1983 Estimate)......................			262	97,649

Comparison by Activity/Subactivity

(Dollar amounts in thousands)

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
State Reclamation Grants..................	—	59,136	—	59,136	—	78,500	—	+19,364
Reclamation Fund Management..............	130	4,724	130	4,847	148	4,901	+18	+54
Federal Reclamation Projects.................	70	28,040	70	28,117	84	9,377	+14	-18,740
Technical Support..........	27	1,134	27	1,154	30	1,221	+3	+67
Rural Lands Reclamation...	—	5,088	—	5,088	—	3,650	—	-1,438
General Administration....	(101)	3,960	—	—	—	—	—	—
TOTAL, APPROPRIATION	328	102,082	227	98,342	262	97,649	+35	-693

Highlights of Budget Changes

State Reclamation Grants — +19,364

Provides grant funding to States for the reclamation of lands damaged during past mining operations. Upon approval of permanent regulatory programs and reclamation plans each State is entitled to receive 50 percent of fund revenues collected within that State. The Fiscal Year 1983 amount represents 74% of anticipated State entitlements from Fiscal Year 1982 revenue. At this level of funding States will initiate approximately 432 projects involving extreme danger and threat to public health and safety.

Reclamation Fund Management +18 +54

Provides for administration of the reclamation program grants to the States, approval and monitoring of State annual project plans, management of the fee compliance program, and maintenance and update of the National Inventory of Abandoned Mine Lands.

Interior Reclamation Projects +14 -18,740

Provides for high priority reclamation projects. The decrease results from limiting Federal program capability to emergency projects as State programs become fully operational.

Technical Support +3 +67

Provides for technical support to States and Federal agencies on problems associated with abandoned mine land reclamation. During Fiscal Year 1983 emphasis will be placed on helping States solve problems as their programs expand.

Rural Land Reclamation — -1,438

Provides for reclamation of previously abandoned mine lands through cooperative agreements with rural lands holders. Administration of this program is accomplished through the Soil Conservation Service (SCS). The reduced program level provides for continuation of contracts initiated in prior years. New project financing is expected to come from the State Reclamation Grants activity through cooperative agreements between the States and SCS.

BUREAU OF MINES

The Bureau of Mines has the mission to help assure that the Nation's national defense, economic, social, and environmental needs, as they relate to minerals and mineral-based materials, are met; and to help assure that the Nation has an adequate supply of minerals. In order to carry out its mission, the Bureau conducts basic and applied research across the minerals cycle from mining to utilization, and serves as a national source for mineral information and analysis.

SUMMARY OF BUREAU APPROPRIATIONS

(Dollar amounts in thousands)

Comparison of 1983 Estimate with 1982 Estimate:

	1982 Estimate		1983 Estimate		Change from 1982	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriation:						
Mines and Minerals	2,529	145,885	2,272	124,676	-257	-21,209
Transfer:						
Mines and Minerals	19	644	(19)	(644)	-19	-644
Proposed 1982 Supplemental:						
Construction and Rehabilitation	—	4,073	—	—	—	-4,073
Trust Funds and Miscellaneous Accounts:						
Contributed Funds	23	800	23	800	—	—
Miscellaneous Accounts	430	—	429	—	-1	—
Subtotal, Trust Funds & Miscellaneous.	453	800	452	600	-1	—
TOTAL, BUREAU OF MINES	3,001	151,402	2,724	125,476	-277	-25,926

Comparison of 1983 Estimate with 1983 Base Budget:

	1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriation:						
Mines and Minerals	2,548	151,124	2,272	124,676	-276	-26,448
Trust Funds and Miscellaneous Accounts:						
Contributed Funds	23	800	23	800	—	—
Miscellaneous Accounts	429	—	429	—	—	—
Subtotal, Trust Funds & Miscellaneous.	452	800	452	800	—	—
TOTAL, BUREAU OF MINES	3,000	151,924	2,724	125,476	-276	-26,448

TABULAR INFORMATION and HIGHLIGHTS OF BUDGET CHANGES

(By appropriation)

APPROPRIATION: MINES AND MINERALS

Summary of Requirements

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			2,529	145,885
Adjustments to base and built-in changes:				
FY 1983 allowance for FY 1982 pay cost	—	+2,000		
FY 1983 allowance for Standard Level User Charge	—	+1,668		
Employee compensation	—	+927		
Subtotal, adjustment to FY 1983 base for pay and related costs			—	+4,595
Transfers:				
Transfer of the Office of Minerals Policy and Research Analysis functions to "Mines and Minerals," Bureau of Mines	+19	+644		
Transfer of unobligated balances from the "Drainage of Anthracite Mines" account to the Construction and Rehabilitation activity, "Mines and Minerals" account	—	+991		
Subtotal, transfers			+19	+1,635

APPROPRIATION: MINES AND MINERALS (Cont'd.)

Summary of Requirements (cont'd.)

(Dollar amounts in thousands)

	FTE/T	Amount	FTE/T	Amount
Supplementals:				
Anticipated 1982 program supplemental for construction of a facility at the Bureau of Mines' site located near Bruceton, Pennsylvania			—	+4,073
Other increases (or decreases):				
Return of 1982 appropriation enacted to date for the Construction and Rehabilitation activity to the Minerals Health and Safety subactivity:				
Construction and Rehabilitation	—	-336		
Minerals Health and Safety Technology	—	+336		
One-time cost of construction of Bureau of Mines' facility near Bruceton, Pennsylvania (Construction and Rehabilitation activity)			—	-5,064
Summary of program activity level assessments that makes up the General Administration activity:				
Minerals Research	—	-17,020		
Minerals Information	—	-4,784		
Subtotal			—	-21,804
General Administration			—	+21,804
Total, adjustments to base and built-in changes			+19	+5,239
1983 Base Budget			2,548	151,124
Program changes (Changes to base budget, detailed below)			-276	-26,448
Total Requirements (1983 Estimate)			2,272	124,676

Comparison by Activity/Subactivity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Minerals Research:								
Minerals Health and Safety Technology	630	46,014	630	47,290	473	37,823	-157	-9,467
Minerals Environmental Technology	170	10,418	170	10,364	133	6,235	-37	-4,329
Mineral Resources Technology	717	31,261	717	32,302	700	33,888	-17	+1,586
Total, Minerals Research	1,517	87,693	1,517	90,156	1,306	77,946	-211	-12,210
Minerals Information:								
Data Collection and Analysis	459	18,953	478	20,408	478	20,408	—	—
Land Assessments	152	9,412	152	9,512	116	5,427	-36	-4,085
Total, Minerals Information	611	28,365	630	29,920	594	25,835	-36	-4,085
Mineral Institutes	—	9,244	—	9,244	—	—	—	-9,244
General Administration	401	20,247	401	21,804	372	20,895	-29	-909
Construction and Rehabilitation	—	336	—	—	—	—	—	—
Total, Appropriation	2,529	145,885	2,548	151,124	2,272	124,676	-276	-26,448

Highlights of Budget Changes

	Change from Base	
	FTE/T	Amount
Minerals Health and Safety Technology	-157	-9,467

The decrease reflects a policy decision to limit federally-funded research and development to high-risk projects with long-term payoff.

APPROPRIATION: MINES AND MINERALS (Cont'd.)

Highlights of Budget Changes (Cont'd.)

	Change from Base	
	FTE/T	Amount
Minerals Environmental Technology	-37	-4,329
The decrease will reduce research on controlling mine waste materials, and will eliminate some areas of mined land reclamation research.		
Mineral Resources Technology	-17	+1,586
The increase will be directed primarily toward developing mineral extraction techniques and processing technologies that will recover and conserve strategic and critical materials, including chromium, nickel, tungsten, and cobalt.		
Land Assessments	-36	-4,085
The decrease for this program is the result of the completion of required wilderness surveys.		
Mineral Institutes	---	-9,244
Fiscal year 1983 funding is not proposed for the Mineral Institutes, which were transferred from the Office of Surface Mining to the Bureau of Mines in January 1982.		
General Administration	-29	-909
The decrease for this program is a result primarily of operating efficiencies.		

The Bureau of Indian Affairs, acting as an agent of the U. S. Government, recognizes a fundamental responsibility to American Indian Tribes, Alaska Native groups and the tribal form of government. This budget places the Bureau's emphasis on three major areas of responsibility. They are: (a) to recognize and preserve the inherent rights of tribal self-government, to strengthen tribal capacity to govern, and to provide resources for tribal government programs; (b) to emphasize management improvement activities that will strengthen BIA's ability to serve Indian people; and (c) to fulfill and execute the Federal Government's trust obligations to American Indian tribes.

SUMMARY OF BUREAU APPROPRIATIONS

Comparison of 1983 Estimate with 1982 Estimate: (Dollar amounts in thousands)

	1982 Estimate		1983 Estimate		Change from 1982	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriations:						
Operation of Indian Programs	15,256	$802,220	14,470	$849,250	-786	$+47,030
Indian Education Assistance1/	68	77,852	68	51,119	-0-	-26,733
Construction	90	93,628	87	106,0002/	-3	+12,372
Impact Aid; School Construction Affecting Indian Land1/	22	9,000	21	838	-1	-8,162
Road Construction	665	47,160	665	43,585	-0-	-3,575
Subtotal, Appropriations	16,101	$1,029,860	15,311	$1,050,792	-790	$+20,932
Proposed 1982 Supplementals:						
Fire Suppression (Supplemental)	-0-	7,000	-0-	-0-	-0-	-7,000
Indian Education Assistance Rescission1/	-0-	-6,255	-0-	-0-	-0-	+6,255
Permanents and Trusts:						
Miscellaneous Permanent Appropriations	311	30,000	311	30,000	-0-	-0-
Miscellaneous Trust Funds	97	538,400	23	571,200	-74	+32,800
Subtotal, Permanents and Trusts	408	$568,400	334	$601,200	-74	$+32,800
TOTAL, BUREAU OF INDIAN AFFAIRS	16,709	$1,599,005	15,845	$1,651,992	-864	$+52,987

Comparison of 1983 Estimate with 1983 Base Budget:

	1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriations Requested:						
Operation of Indian Programs	15,345	$825,187	14,470	$849,250	-875	$+24,063
Indian Education Assistance3/	68	71,547	68	51,119	-0-	-20,428
Construction	90	93,628	87	106,0002/	- 3	+12,372
Impact Aid: School Construction Affecting Indian Land1/	22	9,004	21	838	- 1	-8,166
Road Construction	665	47,485	665	43,585	-0-	-3,900
Subtotal, Appropriations Requested	16,190	$1,046,851	15,311	$1,050,792	-879	$ +3,941
Permanents and Trusts, Subtotal	534	$568,400	534	$601,200	-0-	$+32,800
TOTAL, BUREAU OF INDIAN AFFAIRS	16,724	$1,615,251	15,845	$1,651,992	-879	$+36,741

1/ These education programs would be transferred from the Department of Education in FY 1983 under proposed legislation. FY 1982 figures are shown for comparative purposes.

2/ Includes $29,800 (Ak Chin Irrigation Project) proposed for later transmittal, proposed legislation.

3/ These education programs would be transferred from the Department of Education in FY 1983 under proposed legislation. The FY 1983 base for Indian Education Assistance assumes rescission of $6,255 in FY 1982.

TABULAR INFORMATION and HIGHLIGHTS OF BUDGET CHANGES
(By appropriation)

APPROPRIATION: OPERATION OF INDIAN PROGRAMS

Summary of Requirements

(Dollar amounts in thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			13,256	802,220
Adjustment to base and built-in changes:				
Adjustments for one-time DGPL Spendout in 1982	—	+9,600		
Transfer from Miscellaneous Trust, DGPL (FTE only)	+74	—		
Transfer of Assistant Secretary - Indian Affairs from Office of the Secretary	+15	+740		
Assumption of Facility Programs	—	+1,500		
Increased Cost for Employee Compensation Fund	—	+ 421		
FY 1983 Allowance for annualization of FY 1982 pay cost	—	+10,706		
Total, Adjustments to base and built-in changes			+89	+22,967
1983 Base Budget			13,345	825,187
Program changes (changes to base budget detailed below)			-875	+24,063
Total Requirements (1983 Estimate)			12,470	849,250

Comparison by Activity/Subactivity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Direct Program:								
Education Programs:								
School Operations	3,379	176,106	3,545	177,621	3,349	179,841	-196	+2,220
Johnson O'Malley	---	25,954	---	25,954	---	25,954	---	---
Continuing Education	286	32,444	288	32,704	198	30,877	-90	-1,827
Subtotal	3,665	234,506	3,833	236,279	3,547	236,672	-286	+ 393
Indian Services:								
Tribal Government Services	215	23,789	216	24,172	204	26,339	-12	+2,167
Social Services	413	90,351	415	90,717	422	98,664	+7	+7,947
Law Enforcement	525	32,515	537	34,290	545	36,041	+8	+1,751
Housing	103	29,810	104	30,004	96	23,289	-8	-6,715
Self-Determination Services	128	49,222	103	48,180	42	56,882	-61	+8,702
Navajo-Hopi Settlement Programs	79	4,178	79	4,225	79	3,899	---	-326
Subtotal	1,463	229,865	1,454	231,588	1,388	245,114	-66	+13,526
Economic Development and Employment Programs:								
Employment Development	187	27,120	188	27,417	170	28,410	-18	+993
Business Enterprise Development	198	8,136	199	8,297	198	16,046	-1	+7,749
Road Maintenance	423	17,628	425	19,995	432	22,117	+7	+2,122
Subtotal	808	52,884	812	55,709	800	66,573	-12	+10,864
Natural Resources Development:								
Forestry & Agriculture	1,484	64,165	1,492	70,211	1,470	70,989	-22	+778
Minerals, Mining, Irrigation and Power	43	13,578	43	13,653	42	16,214	-1	+2,561
Subtotal	1,527	77,743	1,535	83,864	1,512	87,203	-23	+3,339
Trust Responsibilities:								
Indian Rights Protection	108	18,316	108	18,469	92	18,248	-16	-221
Real Estate & Financial Trust Services	839	27,050	844	28,693	823	28,957	-21	+264
Subtotal	947	45,366	952	47,162	915	47,205	-37	+43

Comparison by Activity/Subactivity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Facilities Management.............	1,760	83,380	1,770	85,073	1,709	93,381	-61	+8,308
General Administration:								
Management and Administration....	1,644	49,465	1,684	52,239	1,674	56,698	-10	+4,459
Employee Compensation Payments...	—	4,161	—	4,582	—	4,582	—	—
Program Management...............	102	4,350	165	8,691	157	7,822	-8	-869
Subtotal........................	1,746	57,976	1,849	65,512	1,831	69,102	-15	+3,590
General Overhead Reduction........	—	—	—	—	-372	-16,000	-372	-16,000
Total Direct Program (TOTAL APPROPRIATION)................	14,116	802,220	14,205	825,187	13,330	849,250	-875	+24,063
Reimbursable Programs (All):	1,140	41,000	1,140	41,000	1,140	41,000	—	—
TOTAL APPROPRIATION.............	15,256	843,220	15,345	866,187	14,470	890,250	-875	+24,063

Highlights of Budget Changes

	Change from Base	
	FTE/T	Amount
School Operations	-196	+2,220

The 1983 program projects a Federally-funded system serving 39,000 students compared to 41,000 in 1982. This expected reduction is reflected by the planned closure of several off-reservation boarding schools. Two elementary boarding schools (Concho, Oklahoma, and Wahpeton, North Dakota) are proposed for closure at the end of FY 1982. This is in line with the policy of educating children as close to home as possible, especially at the elementary level. Two secondary schools are proposed for closure at the end of the 1982-83 school year—Intermountain, Utah, and Mt. Edgecumbe, Alaska. In addition, some of the day schools operated in Alaska are being proposed for transfer to the State in line with the State's Constitution to establish a single school system. Additional funds are provided for increased costs of the remaining schools, resulting in the net increase of $1,561 for the formula program. Increased costs for education of institutionalized handicapped students require an additional $104. Student transportation is increased $166. Area/Agency level education technical support is increased $1,309 to improve efficiency of centralized educational support to schools. School board training is reduced by $-560 and new start-up costs have been eliminated ($-480).

Johnson O'Malley Education Assistance	—	—

The 1983 program maintains an overall net level equal to the 1982 program, but includes an increase of $249 for pay costs for employees of P.L. 93-638 contractors in compliance with Section 106 (h) of the Act. An offsetting decrease of $211 is planned for the formula program and a $38 reduction for tuition payments.

Continuing Education	-90	-1,827

Higher education scholarship grant program levels established by tribal priorities are proposed for an increase of $986. Special scholarships for graduate programs are reduced $113. Adult education programs are reduced by a net amount of $687. The post-secondary schools are reduced $1,789, including the proposed closure of the Southwest Indian Polytechnic Institute (SIPI), New Mexico. The current enrollment at SIPI can be accommodated at Haskell Indian Junior College, the community colleges or by the Adult Vocational Training program. Tribally controlled community colleges will be funded at a level $224 less than 1982.

Tribal Government Services	-12	+2,167

The aid to Tribal Government program is proposed for a net increase of $2,014, primarily at the tribe/ agency level. These increases primarily provide funds for projects to improve tribal government, such as development of revised constitutions, tribal codes, and to complete and maintain tribal membership rolls. The tribal courts program includes a net increase of $153, primarily for maintenance of CFR courts operated at the area level.

APPROPRIATION: OPERATION OF INDIAN PROGRAMS—Highlights of Budget Changes (Continued)

	Change from Base	
	FTE/T	Amount
Social Services Welfare grants to individuals are expected to require an increase of $7,992, due to reduced employment opportunities on reservations as other Federal programs are scaled down. Indian Child Welfare Act Grants are reduced by $1,900 by elimination of grants to non-reservation applicants. Because of the increased workload, all other Social Services programs are increased $1,540 at the tribe/agency level and a net increase of $315 at Area and Central Office levels.	+7	+7,967
Law Enforcement The 1983 program includes an increase of $1,391 at the tribe/agency level (tribal priorities $+814, P.L. 93-638 pay cost $+577). As economic conditions worsen on reservations the incidence of crime and alcohol abuse increases, requiring additional law enforcement activity. The 1983 program also includes, as a base transfer, the Police Academy currently (1982) operated as part of the Office of Technical Assistance and Training (OTAT) at Brigham City, Utah.	+8	+1,751
Housing The 1983 program includes an increase of $492 established by tribal priorities and $144 for P.L. 93-638 pay cost. Area staff costs are proposed to be reduced by $267; Central Office staff costs by $11; and housing training by $63. In addition, the 1982 conference add-on of $2,592 and the Indian Action Team transfer of $4,416 are not continued into 1983. The 1983 program will build about 690 new homes and renovate and/or enlarge 3,900 existing homes.	-8	-6,715
Self-Determination Services The 1983 program includes a proposed increase of $2,278 for Self-Determination grants to tribal governments (tribal priorities). Area and Central Office training and technical assistance staff costs are reduced by $761. Contract support is proposed for an increase of $3,016 to cover anticipated indirect cost increases of tribal contractors operating Bureau programs. The Office of Technical Assistance and Training (OTAT) is discontinued ($-831) with the Police Academy transferred to Law Enforcement and Tribal Administrative and Accounting Services (TAAS) transferred to Management and Administration. A new initiative of $5,000 is proposed to assist small tribes to acquire and maintain core-management capability to improve their opportunities to operate tribal and federal programs more effectively.	-61	+8,702
Navajo-Hopi Settlement Program The 1983 proposal is a decrease ($326) which represents the planned phaseout of the range restoration and stock reduction programs with the continuation of a program to maintain the restored grazing capacity of the former Joint Use area.	—	-326
Employment Development The 1983 Employment Assistance programs (Direct Employment and Adult Vocational Training) at the tribe/ agency level are proposed for an increase established with tribal priorities of $4,832 (including $198 for P.L. 93-638 pay cost). At the Area Office level a net decrease of $519 is proposed primarily in Direct Employment destination services. The 1982 Indian Action Team transfer to Employment Assistance ($4,722) is not continued. The Indian Action Team (IAT) program is discontinued in 1983 in accordance with 1982 Congressional action. The base funding for the IAT program was not taken from those tribes formerly operating the program. The tribes were offered the opportunity to adjust their 1983 priorities and transfer IAT funds to other Bureau programs.	-18	+493
Business Enterprise Development The 1983 program includes $10,000 for a new economic development initiative which provides grants to tribes for the purposes of 1) initiating business development of natural resources, 2) encouraging private sector investment, and 3) promoting sound business principles. The 1982 Indian Action Team transfer of $1,344 is not continued into 1983. The Credit and Financing program is reduced by a net of $941. The Indian Arts and Crafts Board program is proposed for an increase of $34.	-1	+7,749

	Change from Base	
	FTE/T	Amount
Road Maintenance The 1983 program includes a tribal priority increase of $2,556 at the reservation level and an increase of $286 at the Area Office level. This is partially offset by the discontinuance of the 1983 Indian Action Team transfer of $720. The additional funds for this program will improve the level of maintenance on reservation roads and reduce road deterioration.	+7	+2,122
Forestry and Agriculture The 1983 program includes tribal priority changes (Natural Resources General $+54, Agriculture $+740, Forestry $+4,491, Water Resources $+23, and Wildlife/Parks $-187); P.L. 93-638 pay cost increases ($+416); area offices changes ($-858, especially Agriculture and Wildlife/Parks); Central Office staff adjustments ($+144 Wildlife/Parks); discontinuance of the 1982 Indian Action Team transfers (Agriculture $-440; Water Resources $-310; Wildlife/Parks $-288) and Papago Farms ($-317); and increases in Timber Sale Administration ($+853), Fire Suppression ($+32), Water Resources ($+184), and Fisheries/Hatchery Operations ($+281) related to the restoration of the 4% Congressional reductions made in FY 1982.	-22	+778
Minerals, Mining, Irrigation and Power The 1983 program includes tribal priority increases of $106; area office ($+38); and $235 to restore the Energy and Mineral Resources Inventory program to a $6,000 level as originally proposed in FY 1982. An increase of $2,182 is proposed for Irrigation Operation and Maintenance to continue to provide funds for insuring the continued delivery of water to meet contractual and legal obligations and to prevent deterioration of the Indian irrigation systems.	-1	+2,561
Indian Rights Protection The 1983 program includes tribal priorities which net to an increase of $360; area office reductions of $-598; P.L. 93-638 pay cost increases ($+17); archeological clearances ($+12); and a decrease of $1,000 for the Statute of Limitations program. Also included is an increase of $1,000 for assisting in financing land selection settlement costs of three Alaska Native corporations as required by the Alaska National Interest Lands Conservation Act (P.L. 96-487).	-16	-221
Real Estate and Financial Trust Services The 1983 program includes tribal priority increases of $988; P.L. 93-638 pay cost increases of $46; area office reductions of $660; Central Office staff cost reductions of $94; and restoration of special appraisals to FY 1981 levels ($+53). These programs include Trust Services, General; Appraisals; Other Real Estate Services; and Financial Trust Services.	-21	+254
Facilities Management The 1983 program proposes a net increase of $8,045 for operation and maintenance of existing Bureau owned facilities, including the closures of several off-reservation boarding schools (Concho and Wahpeton by the end of FY 1982; Mt. Edgecumbe and Intermountain at the end of the 1982-83 school year) and the provision of funds for increased utility and material costs. Previously private schools are provided an increase of $205; new direct rentals are $31; and facility O&M for those new facilities opening in FY 1983 is $180. Also included is a P.L. 93-638 pay cost increase of $35; and an area office reduction of $188.	-61	+8,308
Management and Administration The 1983 program includes tribal priority increases of $849 (Executive Direction $+328; Administrative Services $+462; Safety Management $+59). This increase will improve management and administrative support at the reservation level. Area offices are proposing increases of $1,892 which are offset by reductions in other programs at that level. Area offices are generally increasing their administrative support role and decreasing or delegating program management roles in relation to agencies. Intragovernmental assessments for postage, FTS telecommunications, etc. ($+1,087) have increased because of rate increases and deregulation. Central Office Executive Direction ($+144) will provide staff support to the Office of the Assistant Secretary-Indian Affairs which has been transferred to the Bureau as a Base transfer in 1983 from the Office the Secretary. Tribal Administrative and Accounting Services (TAAS), also has been transferred from OTAT as a base transfer. Funds have been requested ($+487) to provide full year cost of hardware acquisition as part of the ADP modernization program currently underway.	-10	+6,45

APPROPRIATION: OPERATION OF INDIAN PROGRAMS—Highlights of Budget Changes (Continued)

	Change from Base FTE/T	Change from Base Amount
Employee Compensation Payments	—	—

Payments from the Federal Employee Compensation fund for Bureau employees totalled $4,582 in 1981. The reimbursement of this amount to the Department of Labor is included in the 1983 request as a built-in adjustment to the 1983 Base.

	FTE/T	Amount
Program Management	-8	-869

The 1983 program included reductions for Construction Management ($-231) and Road Construction Management ($-339) which were added to this activity by Congress in 1982. Education Program Management ($-229) was transferred as a base transfer in 1983 as directed by Congress. These programs are not administrative but provide direct program management at the Central Office level to the Buildings & Utilities construction program, the Road Construction programs and the Education program; for which program operations are funded separately.

	FTE/T	Amount
General Overhead Reduction	-372	-16,000

In 1983, an overall reduction of $16,000 will be absorbed from overhead through programmatic and geographic consolidations and implementation of more cost effective methods of program management and administration. An estimate of 372 work years of staff will be saved.

APPROPRIATION: INDIAN EDUCATION ASSISTANCE

Summary of Requirements

(Dollar amounts in thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			68	77,852
Adjustment to base and built-in changes:				
Effects of proposed FY 1982 recission	—	-6,255		
Decreased rent payments to GSA (SLUC)	—	-50		
Total, Adjustments to base and built-in changes			—	-6,305
1983 Base Budget			68	71,547
Program changes (changes to base budget detailed below)			—	-20,428
Total Requirements (1983 Estimate)			68	51,119

Comparison by Activity/Subactivity

	1982 Appropriation a/		1983 Base Budget b/		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Payments to LEA's and non-LEA's	—	54,960	—	50,380	—	35,465	—	-14,915
Special programs for Indian students	—	14,880	—	13,640	—	9,600	—	-4,040
Special programs for Indian adults	—	5,213	—	4,778	—	3,365	—	-1,413
Program administration	68	2,799	68	2,749	68	2,689	—	-60
TOTAL APPROPRIATION	68	77,852	68	71,547	68	51,119	—	-20,428

a/ These activities were financed in the Department of Education in FY 1982.
b/ The 1983 Base assumes effects of FY 1982 proposed recission ($-6,255).

Highlights of Budget Changes

	Change from Base FTE/T	Change from Base Amount
Payments to LEA's and non-LEA's	—	-14,915

These are payments to local educational agencies (LEA's) and tribal schools for supplemental elementary and secondary programs to meet the special educational and culturally related academic needs of Indian children. Grants will be made to schools serving 300,000 Indian students, with a per pupil cost of $108. An amount equal to 9% of the program is reserved for discretionary awards to Indian-controlled schools.

APPROPRIATION: INDIAN EDUCATION ASSISTANCE–Highlights of Budget Changes (Continued)

	Change from Base	
	FTE/T	Amount
Special Programs for Indian Students	—	-4,040

Funds support planning, pilot and demonstration projects; educational service projects; education personnel training; resource and evaluation centers; fellowships; and evaluation projects. About 2,000 children will be served and 438 education personnel trained. Approximately 135 fellowships will be made for study in technical and professional fields.

Special Programs for Indian Adults	—	-1,413

Competitive grants are made to improve educational opportunities for about 8,000 Indian adults, to decrease illiteracy, earn high school equivalency diplomas, and to encourage the development of Indian culture and heritage programs.

Program Administration	—	-60

Funds support the administrative expenses of operating the programs as well as planning and evaluation studies to provide information for policy decisions and program improvement.

APPROPRIATION: CONSTRUCTION

Summary of Requirements

(Dollar amounts in thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			90	93,628
Adjustment to base and built-in changes:				
None	—	—		
Total, Adjustments to base and built-in changes			—	—
1983 Base Budget			90	93,628
Program changes (changes to base budget detailed below)			-3	+12,372
Total Requirements (1983 Estimate)			87	106,000 a/

Comparison by Activity/Subactivity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Irrigation Systems	90	46,192	90	46,192	87	45,900a/	-3	-292
Buildings & Utilities	—	47,436	—	47,436	—	60,100	—	+12,664
TOTAL APPROPRIATION	90	93,628	90	93,628	87	106,000a/	-3	+12,372

a/ Includes $29,800 (Ak Chin Irrigation Project) proposed for later transmittal, proposed legislation.

Highlights of Budget Changes

	Change from Base	
	FTE/T	Amount
Irrigation Systems	-3	-292

The 1983 program includes $1.0 million for the project at Fallon, Nevada; $2.6 million for the Grass Rope Project in South Dakota; and $7.4 million for projects which promise a quick return for investment. Funding is being requested for continuation of a major effort for assuring dam safety which was initiated in FY 1982. The request also includes funds for supervision and engineering for irrigation construction and rehabilitation work on Indian irrigation projects throughout the arid west.

A separate request for $29.8 million will be submitted for the legislatively-mandated Ak Chin project in Arizona upon enactment of legislation increasing the limitation on the authorization for the project.

Buildings and Utilities	—	+12,664

The 1983 request for construction of Buildings and Utilities includes $15.0 million for construction of Phase I of the Hopi Jr./Sr. High School in Arizona and $43.1 million for Facilities Improvement and Repairs. Funding requested will be used to correct unsafe and unsanitary conditions; to initiate high priority energy conservation projects; to correct functional deficiencies in existing Bureau facilities; and for preparation of plans, engineering supervision and surveys.

APPROPRIATION: IMPACT AID - SCHOOL CONSTRUCTION AFFECTING INDIAN LANDS

Summary of Requirements

(Dollar amounts in thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriations Currently Available, 1982			22	9,000
Adjustments to base and built in changes:				
Increased rent payments to GSA (SLUC)	—	+ 4		
Total Adjustments to base and built in changes			—	+4
1983 Base Budget			22	9,004
Program changes (Changes to base budget, detailed below)			- 1	-8,166
Total Requirements (1983 Estimate)			21	838

Comparison by Activity/Subactivity

	1982 Appropriation a/		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
School Construction-Indian Lands	—	8,160	—	8,160	—	—	—	-8,160
Program Administration	22	840	22	844	21	838	-1	- 6
TOTAL APPROPRIATION	22	9,000	22	9,004	21	838	-1	-8,166

a/ These activities were financed in the Department of Education in FY 1982.

Highlights of Budget Changes

	Change from Base FTE/T	Amount
Impact Aid: School Construction Affecting Indian Land	-1	-8,166

This program is proposed for transfer from the Department of Education. Funds were provided to construct public schools in districts serving areas of Indian lands which are large enough to adversely affect the taxable land base and which serve significant numbers of Indian students. The FY 1983 request of $0.8 million provides funds for staff to supervise the projects begun in prior years; new project funding is not requested.

APPROPRIATION: ROAD CONSTRUCTION

Summary of Requirements

(Dollar amounts in thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			665	67,160
Adjustments to base and built-in changes:				
FY 1983 Allowance for annualization of FY 1982 pay cost.	—	+325		
Total Adjustments to base and built-in changes			—	+325
1983 Base Budget			665	67,485
Program changes (changes to base budget detailed below)			—	-3,300
Total requirements (1983 estimate)			665	63,585

Comparison by Activity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Road Construction	665	67,160	665	67,385	665	63,385	—	-3,300
TOTAL APPROPRIATION	665	67,160	665	67,385	665	63,385	—	-3,300

APPROPRIATION: ROAD CONSTRUCTION - Highlights of Budget Changes (Continued)

Highlights of Budget Changes

	Change from Base	
	FTE/T	Amount
Road Construction	—	-3,900

Program reductions are taken from the funds allocated to the Area Offices by formula (and reallocated by Areas to reservations) for construction of roads with high tribal priority. These reductions will be accomplished by delays in construction schedules of roads which are of lower priority such as:

Anadarko - regrading 4 miles East of Riverside Road, $160,000
Billings - paving 2.4 miles of Parker Canyon Road, Rocky Boy's $208,000
Phoenix - paving Dam Road Route 13, San Carlos Apache, $330,000
Sacramento - paving 1.4 miles of Santa Ynez Streets, $176,000
Muskogee - regrading 4 miles of Eucha Road, Rout 718, Cherokee $650,000
Eastern - regrading 1.3 miles of Old No. 4 Road, Route 1236, Cherokee $154,000
Portland - graveling 3.1 miles of Philbin Road, Route 89, Fort Hall $137,000

Funds for initiating a bridge replacement and rehabilitation program and for access roads to HUD Indian Housing Projects will not be affected by the reduction. The program detail is as follows:

	FY 1983 Base	FY 83 Estimate	Change
Bridge Replacement & Rehabilitation	3,986,000	3,986,000	---
Housing Access Roads	2,848,000	2,848,000	---
Area Distribution (by formula)	40,651,000	36,751,000	-3,900
Total Road Construction	47,485,000	43,585,000	-3,900

APPROPRIATION: MISCELLANEOUS PERMANENT APPROPRIATIONS

Summary of Requirements

(Dollar amounts in thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			511	30,000
Adjustments to base and built-in changes:				
None	—	—		
Total Adjustments to base and built-in changes			—	—
1983 Base Budget			511	30,000
Program changes (none)			—	—
Total requirements (1983 estimate)			511	30,000

Comparison by Activity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Claims and Treaty Obligations	—	1,000	—	1,000	—	1,000	—	—
Operation & Maintenance, Indian Irrigation Systems	370	12,400	370	12,400	370	12,400	—	—
Power Systems, Indian Irrigation Projects	141	16,600	141	16,600	141	16,600	—	—
TOTAL APPROPRIATION	511	30,000	511	30,000	511	30,000	—	—

APPROPRIATION: MISCELLANEOUS TRUST FUNDS

Summary of Requirements

(Dollar amounts in thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			97	538,400
Adjustments to base and built-in changes:				
Transfer to Operation of Indian Programs, IMPL (FTE only)	-74	—		
Total Adjustments to base and built-in changes			-74	—
1983 Base Budget			23	538,400
Program changes (none)			—	+32,800
Total requirements (1983 estimate)			23	571,200

Comparison by Type of Authority

Trust Funds:	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Current, definite	—	3,000	—	3,000	—	3,000	—	—
Current, indefinite	—	50,000	—	50,000	—	50,000	—	—
Permanent, indefinite	97	485,400	23	485,400	23	518,200	—	+32,000
TOTAL APPROPRIATION	97	538,000	23	538,400	23	571,200	—	+32,800

OFFICE OF TERRITORIAL AND INTERNATIONAL AFFAIRS

The Assistant Secretary for Territorial and International Affairs has been assigned the Secretary of Interior's responsibilities for the Trust Territory of the Pacific Islands and the U.S. flag territories. Although the Secretary has certain responsibilities for, and authorities and jurisdictions over the Trust Territory and territorial governments, those governments are not entities of the Department of the Interior nor are they instrumentalities of the Federal Government. Our broad objectives are to promote the political, economic, and social development of the territories and Trust Territory, leading each toward greater self-government and self-reliance, and to help further international peace and security by conducting territorial affairs in close coordination with the foreign and defense policies of the United States.

SUMMARY OF BUREAU APPROPRIATIONS

Comparison of 1983 Estimate with 1982 Estimate: (Dollar amounts in thousands)

	1982 Estimate		1983 Estimate		Change from 1982	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriations:						
Administration of Territories	104	86,990	110	58,076	+6	-28,914
Trust Territory of the Pacific Islands	30	76,157	30	75,500	—	-657
Subtotal, Appropriations Requested	134	163,147	140	133,576	+6	-29,571
Proposed 1982 Supplementals:						
Admin. (Northern Mariana Islands Inflation Adjust.)	—	3,402	—	(N/A)	—	-3,402
TTPI (Bikini Support)	—	21,000	—	(500*)	—	-21,000
Subtotal, 1982 Proposed Supplementals	—	24,402	—	(500)	—	-24,402
Permanents and Trusts:						
Payments to U.S. Territories, Fiscal Assistance	—	54,200	—	54,200	—	—
Subtotal, Permanents and Trust	—	54,200	—	54,200	—	—
TOTAL, TERRITORIAL & INTERNATIONAL AFFAIRS	134	241,749	140	187,776	+6	-53,973

Comparison of 1983 Estimate with 1983 Base Budget:

	1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriations Requested:						
Administration of Territories	114	90,776	110	58,076	-4	-32,700
Trust Territory of the Pacific Islands	30	76,557	30	75,500	—	-1,057
Subtotal, Appropriations Requested	144	167,333	140	133,576	-4	-33,757
Permanents and Trusts, Subtotal	—	54,200	—	54,200	—	—
TOTAL, TERRITORIAL & INTERNATIONAL AFFAIRS	144	221,533	140	187,776	-4	-33,757

TABULAR INFORMATION AND HIGHLIGHTS OF BUDGET CHANGES
(By appropriation)

APPROPRIATION: ADMINISTRATION OF TERRITORIES

Summary of Requirements

(Dollar amounts in thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			104	86,990
Adjustments to base and built-in changes:				
Proposed supplemental for NMI inflation adjustment	—	+3,402		
Transfer of funding for Assistant Secretary - TIA	10	+ 384		
Total, adjustments to base and built-in changes			+ 10	+3,796
1983 Base Budget			114	90,776
Program changes (Changes to base budget, detailed below)			-4	-32,700
Total Requirements (1983 Estimate)			110	58,076

APPROPRIATION: ADMINISTRATION OF TERRITORIES (Cont'd.)

(Dollar amounts in thousands)

Comparison by Activity/Subactivity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Guam								
Economic development fund...	—	240	—	240	—	500	—	+260
Construction grants.........	—	11,246	—	11,246	—	3,165	—	-8,081
Total, Guam.............	—	11,486	—	11,486	—	3,665	—	-7,821
American Samoa								
Judiciary..................	3	720	3	720	3	681	—	-39
Operations.................	—	16,944	—	16,944	—	18,222	—	+1,278
Construction grants.........	—	7,099	—	7,099	—	1,480	—	-5,619
Economic development fund...	—	240	—	240	—	—	—	-240
Special programs...........	—	144	—	144	—	—	—	-144
Total, American Samoa...	3	25,147	3	25,147	3	20,383	—	-4,764
Virgin Islands								
Hospital construction.......	—	21,505	—	21,505	—	—	—	-21,505
Total, Virgin Islands...	—	21,505	—	21,505	—	—	—	-21,505
Northern Mariana Islands								
Operations.................	—	13,225	—	15,230	—	14,228	—	-1,002
Construction...............	—	6,412	—	7,384	—	6,897	—	-487
Economic Development........	—	2,805	—	3,230	—	3,018	—	-212
Total Covenant..........	—	22,442	—	25,844	—	24,143	—	-1,701
Hospital construction.......	—	1,296	—	1,296	—	4,000	—	+2,704
Total, Northern Marianas..............	—	23,738	—	27,140	—	28,143	—	+1,003
Comptrollers								
American Samoa..............	11	546	11	546	11	569	—	+23
Virgin Islands..............	19	836	19	836	19	880	—	+44
Guam.......................	19	807	19	807	19	891	—	+84
NMI/TTPI...................	19	898	19	898	19	960	—	+62
Total, Comptrollers.....	68	3,087	68	3,087	68	3,300	—	+213
NMI Laws Commission, Total	4	192	4	192	—	—	-4	-192
Territorial Administration								
Territorial and International Affairs.....................	29	1,115	35	1,499	39	1,835	—	+336
Technical Assistance Support..................	—	720	—	720	—	750	—	+ 30
Total, Territorial Administration......	29	1,835	39	2,219	39	2,585	—	+366
TOTAL APPROPRIATION.......	104	86,990	114	90,776	110	58,076	-4	-32,700

Highlights of Budget Changes

	Change from Base	
	FTE/T	Amount
Guam Economic Development Loan Fund		
The increase represents additional requirements for high-risk loans for small businesses that will increase the economic base on Guam.	—	+260
Guam Construction		
The decrease is due to the concentration of funding for capital improvement projects in Guam's water supply and distribution system and in developing its commercial port.	—	- 8,081

Highlights of Budget Changes (Cont'd.)

(Dollar amounts in thousands)

	Change from Base	
	FTE/T	Amount
American Samoa Judiciary		
Funding was provided in FY 1982 for essential repairs of the court structure; operations remain at a constant level.	---	-39
American Samoa Operations		
The increase is required to maintain the current level of operations with rising costs of services, utilities and supplies.	---	+1,278
American Samoa Construction		
The decrease reflects the required levels and includes funding for significant items at the current time.	---	-5,619
American Samoa Economic Development Loan Fund		
No funding is being sought at this time.	---	-240
American Samoa Special Programs		
There are no special program requirements at this time.	---	-144
Virgin Islands Hospital Construction		
Funding was provided over a three-year period for construction of hospital facilities; FY 1982 represented the final increment.	---	-21,505
Northern Mariana Islands Covenant		
The decrease from the base results from the inclusion in the base of the 1982 supplemental for the annual inflation adjustment. The request actually exceeds the corresponding amount in the FY 1982 Budget by $1,701,000.	---	-1,701
Northern Mariana Islands Hospital Construction		
Planning and design funds were provided in the base program. The request will provide funds to begin actual construction of the project.	---	+2,704
Comptrollers		
Minor increases are requested for all four offices, primarily due to the requirements for changes in station of comptroller personnel.	---	+213
NMI Laws Commission		
The Commission's work will end early in FY 1983; sufficient funding has been provided in earlier appropriations for the Commission to complete its required work.	-4	-192
Territorial and International Affairs		
Funding for the Immediate Office of the Assistant Secretary - TIA was provided in another appropriation in FY 1982.	---	+336
The increase will provide for additional operating costs and for the generation of an economic and social data base for the territories, an essential tool for economic development which at this time does not exist.		
Technical Assistance Support		
The increase will provide additional technical assistance to the territorial governments.	---	+30

APPROPRIATION: TRUST TERRITORY OF THE PACIFIC ISLANDS

(Dollar amounts in thousands)

Summary of Requirements

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			30	76,157
Adjustments to base and built-in changes:				
Recurring costs of 1982 supplemental for Bikini support	—	+400		
Total, adjustments to base and built-in changes			—	+400
1983 Base Budget			30	76,557
Program changes (Changes to base budget, detailed below)			—	-1,057
Total Requirements (1983 Estimate)			30	75,500

Comparison by Activity/Subactivity

	1982 Appropriation		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Operations:								
TT Headquarters	30	6,144	30	6,144	30	4,630	—	-1,514
College of Micronesia	—	1,344	—	1,344	—	1,400	—	+56
Marshall Islands Government	—	9,707	—	9,707	—	10,358	—	+651
Republic of Palau	—	8,939	—	8,939	—	9,575	—	+636
Federated States of Micronesia	—	33,558	—	33,558	—	35,137	—	+1,579
Total Operations	30	59,692	30	59,692	30	61,100	—	+1,408
Special Operations:								
Enhanced Operation & Maintenance	—	4,703	—	4,703	—	1,500	—	-3,203
Fuel/Claims Contingency Reserve	—	2,400	—	2,400	—	2,800	—	+400
Satellite Communications	—	—	—	—	—	1,000	—	+1,000
Total, Special Operations	—	7,103	—	7,103	—	5,300	—	-1,803
Capital Improvements:								
Capital relocation	—	2,880	—	2,880	—	7,800	—	+4,920
Other construction	—	3,264	—	3,264	—	—	—	-3,264
Prior-year restoration	—	2,400	—	2,400	—	—	—	-2,400
Total Capital Improvements	—	8,544	—	8,544	—	7,800	—	-744
Special Programs:								
Enewetak support	—	818	—	818	—	800	—	-18
Bikini support	—	—	—	400	—	500	—	+100
Total, Special Programs	—	818	—	1,218	—	1,300	—	+82
TOTAL, APPROPRIATION	30	76,157	30	76,557	30	75,500	—	-1,057

Highlights of Budget Changes

	Change from Base	
	FTE/T	Amount
Trust Territory Headquarters	—	-1,514

Trust Territory Headquarters is phasing down its operations as its functions and responsibilities are gradually turned over to the three emerging governments.

College of Micronesia

	FTE/T	Amount
The increase is required in order to maintain the same level of activity as in the base program, covering increasing costs of utilities and maintenance.	—	+56

Highlights of Budget Changes

(Dollar amounts in thousands)

	Change from Base	
	FTE/T	Amount
Marshall Islands Government As the new government takes on the responsibilities and functions once handled by the Trust Territory Government and now being turned over to the Marshall Islands Government, it is faced with increased costs related to these new responsibilities and functions.	---	+651
Republic of Palau This increase will help to cover the additional pay costs resulting from the recent salary adjustments for government employees now responsible for handling the additional functions and responsibilities being transferred to the new government from the Trust Territory Headquarters.	---	+636
Federated States of Micronesia The increase for the Federated States of Micronesia includes increases for the governments of the four states comprising the Federated States of Micronesia (FSM), Truk, Ponape, Kosrae, and Yap, and also for the Central Government of the FSM. Not only is there a function transfer occurring from the TT Headquarters, but the individual states are assuming significant responsibilities themselves.	---	+1,579
Enhanced Operations & Maintenance The centralized program for enhancing operations and maintenance in the Trust Territory is being phased down as the emerging governments assume more of the responsibilities for operating and maintaining their capital infrastructure.	---	-3,203
Fuel/Claims Contingency Reserve The increase is required to cover increases in the price of fuel and to pay claims adjudicated against the Trust Territory.	---	+400
Satellite Communications This provides for operations, maintenance and space segment costs for the seven standard "B" satellite terminals now being installed to aid in establishing an adequate communications system in the Trust Territory.	---	+1,000
Capitol Relocation Funding is for the first increment of actual construction costs. Planning and design funds were provided in the base program.	---	+4,920
Other Construction Funds provided in the base program for the repair of essential infrastructure are not required in the budget year. Funding for the multi-year capital infrastructure development plan was completed in 1982.	---	-3,264
Prior-Year Restoration The base program provided for the restoration of funding levels for projects from which funds were reprogrammed for essential operations needs. Funding for the multi-year capital infrastructure development program developed in 1975, was completed in 1982.	---	-2,400
Enewetak Support The decrease results from changes in the levels of support required.	---	-18
Bikini Support The increase is due to changes in the cost of providing food and other support services.	---	+100

OFFICE OF THE SOLICITOR

The Solicitor's Office furnishes competent and timely legal advise and services to the Secretary, the Under Secretary, the Assistant Secretaries, and the various bureaus and divisions within the Department to assist in accomplishing their goals, objectives and tasks.

SUMMARY OF BUREAU APPROPRIATIONS

Comparison of 1983 Estimate with 1982 Estimate:

(Dollar amounts in thousands)

	1982 Appropriation		1983 Estimate		Change from 1982	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriations Salaries and Expenses	380	17,600	376	19,071	-4	+1,471
TOTAL, OFFICE OF THE SOLICITOR	380	17,600	376	19,071	-4	+1,471

Comparison of 1983 Estimate with 1983 Base Budget:

	1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriations Salaries and Expenses	376	18.039	376	19,071	---	+1,032
TOTAL, OFFICE OF THE SOLICITOR	376	18,039	376	19,071	---	+1,032

TABULAR INFORMATION AND HIGHLIGHTS OF BUDGET CHANGES
(By appropriation)

APPROPRIATION: SALARIES AND EXPENSES

Summary of Requirements

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			380	17,600
Adjustments to base and built-in changes:				
FY 1983 allowance for 1982 pay cost	---	+446		
Rental payments to GSA	---	+64		
Other increases and decreases:				
Reduction of positions	-4	-71		
Total, Adjustments to base and built-in changes			-4	+439
1983 Base Budget			376	18,039
Program changes (Changes to base budget, detailed below)			---	+1,032
Total Requirements (1983 Estimate)			376	19,071

Comparison by Activity

	1982 Appropriation		1982 Base Budget		1983 Estimate		Change from 1982	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Legal Services	342	14,762	338	15,058	338	16,030	---	+972
General Administration	38	2,838	38	2,981	38	3,041	---	+60
TOTAL, APPROPRIATION	380	17,600	376	18,039	376	19,071	---	+1,032

Highlights of Budget Changes	Change from Base FTE/T	Change from Base Amount
Management Information System	---	+1,032

Provide funding to develop an automated management information system to monitor legal items, personnel, funding and written materials.

OFFICE OF THE SECRETARY

The Office of the Secretary provides executive level leadership, policy and guidance to the diverse Departmental programs. As the Nation's principal conservation agency, the Department has responsibility for most of our Nationally owned public land and natural resources. The responsibilities of the Department include land and water resources, fish and wildlife, preserving the environment and cultural values of our National parks and historic places, mineral resources, American Indian and Island Territories and the Outer Continental Shelf.

SUMMARY OF BUREAU APPROPRIATIONS

Comparison of 1983 Estimate with 1982 Estimate: (Dollar amounts in thousands)

	1982 Estimate		1983 Estimate		Change from 1982	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriations:						
Departmental Management	785	40,737	746	44,157	-39	+3,420
Construction Management	18	3,840	18	—	—	-3,840
Inspector General	220	10,339	238	11,400	+18	+1,061
Youth Conservation Corps	—	4,200	—	—	—	-4,200
Subtotal, Appropriations	1,023	59,116	1,002	55,557	-21	-3,559
Other Accounts:						
Working Capital Fund	316	—	330	—	+14	—
Youth Programs	108	—	77	—	-31	—
Advances and Reimbursements	4	—	4	—	—	—
Subtotal, Other Accounts	428	—	411	—	-17	—
Transfers: 1/						
Departmental Management	-16	-524	—	—	+16	+524
Inspector General	-3	-120	—	—	+3	+120
Subtotal, Transfers	-19	-644	—	—	+19	+644
TOTAL, OFFICE OF THE SECRETARY	1,432	58,472	1,413	55,557	-19	-2,915

1/ Amounts transferred in 1982 are included in respective appropriation accounts for 1983.

Comparison of 1983 Estimate with 1983 Base Budget:

	1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriations:						
Departmental Management	744	42,727	746	44,157	+2	+1,430
Construction Management	18	3,840	18	—	—	-3,840
Inspector General	217	10,219	238	11,400	+21	+1,181
Subtotal, Appropriations	979	56,786	1,002	55,557	+23	-1,229
Other Accounts, Subtotal	428	—	411	—	-17	—
TOTAL, OFFICE OF THE SECRETARY	1,407	56,786	1,413	55,557	+6	-1,229

TABULAR INFORMATION AND HIGHLIGHTS OF BUDGET CHANGES
(By appropriation)

APPROPRIATION: DEPARTMENTAL MANAGEMENT

Summary of Requirements

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			785	40,737
Adjustments to base and built-in changes:				
1983 Allowance for 1982 Pay Cost	—	+1,531		
Transfers:				
A/S - Indian Affairs to Bureau of Indian Affairs	-15	-697		
A/S - Territorial and International Affairs to Administration of Territories	-10	-384		
Ethics function from Office of the Inspector General	+3	+120		
Minerals Policy and Research Analysis to Bureau of Mines	-19	-644		
Employees' Compensation Fund Payments	—	+1,534		
Full-year cost in 1983 of positions financed for part year in 1982	—	+51		
Rental payments to GSA (SLUC)	—	+479		
Total, adjustments to base and built-in changes			-41	+1,990
1983 Base Budget			744	42,727
Program changes (Changes to base budget, detailed below)			+2	+1,430
Total Requirements (1983 Estimate)			746	44,157

(Dollar amounts in thous

Comparison by Activity/Subactivity

	1982 Estimate		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Departmental Direction:								
Secy's Immediate Office	24	1,142	24	1,189	24	1,215	—	+26
Executive Secretariat	8	166	8	177	8	200	—	+23
Cong. & Legis. Affairs	36	966	36	1,029	36	1,046	—	+17
Equal Opportunity	39	1,193	48	1,688	43	1,676	-5	-12
Field Coordination	2	120	2	129	3	200	+1	+71
Public Affairs	23	624	23	684	23	700	—	+16
Small & Disadvantaged Business Utilization	9	427	—	—	—	—	—	—
Total, Dept'l Dir.	141	4,638	141	4,896	137	5,037	-4	+141
Program Direction & Coord:								
A/S - Energy & Minerals	17	726	17	765	17	775	—	+10
A/S - Land & Water Res.	17	759	17	799	17	810	—	+11
A/S - Fish & Wildlife & Parks	17	713	17	758	17	769	—	+11
A/S - Indian Affairs	15	697	—	—	—	—	—	—
A/S - Terr. & International Affairs	10	384	—	—	—	—	—	—
Total, Prog. Direction & Coordination	76	3,281	51	2,322	51	2,354	—	+32
Policy, Budget & Admin:								
A/S - Policy, Budget & Adm.	15	691	15	742	15	755	—	+13
Environ. Project Review	27	945	27	994	28	1,067	+1	+73
Acquis. & Property Mgmt.	24	1,158	24	1,216	25	1,368	+1	+152
Personnel Management	36	1,360	36	1,443	35	1,565	-1	+122
Administrative Services	92	2,856	92	3,030	94	3,141	+2	+111
Information Resources Mgmt.	110	4,110	110	4,258	110	4,499	—	+241
Policy Analysis	36	1,440	36	1,534	36	1,609	—	+75
Office of Budget	27	1,192	27	1,269	28	1,369	+1	+100
Outer Continental Shelf Program	10	483	10	508	10	535	—	+27
Financial Management	16	703	16	752	16	782	—	+30
Total, Policy, Budget & Administration	393	14,938	393	15,746	397	16,690	+4	+944

(Dollar amounts in thousands)

Comparison by Activity/Subactivity

	1982 Estimate		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Hearings and Appeals	136	5,639	136	6,053	136	6,146	—	+93
Central Services	—	8,969	—	10,982	—	11,162	—	+180
Alaska Subsistence Grant	—	960	—	960	—	1,000	—	+40
Office of Water Policy	23	1,768	23	1,768	25	1,768	+2	—
TOTAL, APPROPRIATION 1/	769	40,213	744	42,727	746	44,157	+2	+1,430

1/ Amounts shown in 1982 reflect transfers.

Highlights of Budget Changes

	Change from Base	
	FTE/T	Amount
Secretary's Immediate Office Additional 1983 funds are requested to provide for full cost of 1981 general schedule and January 1982 executive pay raises for authorized positions, not funded in base amounts and for other increased support costs to maintain the current level of operations.	—	+26
Executive Secretariat Request provides additional resources to maintain the current level of operations and provide for full cost of 1981 general schedule pay raise, not funded in base amounts.	—	+23
Congressional and Legislative Affairs Increase requested to provide for full cost of 1981 general schedule and January 1982 executive pay raises for authorized positions, not funded in base amounts.	—	+17
Equal Opportunity Reduction proposed to reflect a decrease in program activity related to the Small and Disadvantaged Business function, partially offset by increases to provide for the full cost of the 1981 general schedule and January 1982 executive pay raises for authorized positions, not funded in base amounts.	-3	-12
Field Coordination Increase to maintain current operations in addressing Secretary's field representation responsibilities and provide for full cost of 1981 general schedule and January 1982 executive pay raises for current authorized positions, not funded in base amounts.	+1	+71
Public Affairs Increase requested to provide for full cost of 1981 general schedule and January 1982 executive pay raises for current authorized positions not funded in base amounts.	—	+16

APPROPRIATION: DEPARTMENTAL MANAGEMENT (Cont'd.)

Highlights of Budget Changes (Cont'd.)

	Change from Base	
	FTE/T	Amount
A/S - Energy and Minerals	—	+10
A/S - Land and Water Resources	—	+11
A/S - Fish and Wildlife and Parks	—	+11
A/S - Policy, Budget and Administration	—	+13

Increase requested to maintain the current level of operations in the Assistant Secretaries' offices by providing for full cost of 1981 general schedule and January 1982 executive pay raises for current authorized positions not funded in base amounts. No other changes proposed.

	FTE/T	Amount
Environmental Project Review	+1	+73

Increase requested to maintain the current level of operations, to provide for full cost of 1981 general schedule and January 1982 executive pay raises for current authorized positions, and to fund an additional workyear of effort in support of the Department's environmental program.

	FTE/T	Amount
Acquisition and Property Management	+1	+152

An increase is requested to provide for full cost of 1981 general schedul. and January 1982 executive pay raises, contract funding and an additional workyear to maintain current operations and provide resources in 1983 which were not available to address current responsibilities due to budget restrictions imposed in 1982.

	FTE/T	Amount
Personnel Management	-1	+122

The requested increase will provide for the full cost of the 1981 general schedule and January 1982 executive pay raises, and for cost of development of personnel data file to be used jointly with Equal Opportunity.

	FTE/T	Amount
Administrative Services	+2	+111
Information Resources Management	—	+241
Policy Analysis	—	+75
Office of Budget	+1	+100
Outer Continental Shelf Program	—	+27
Financial Management	—	+30
Hearings and Appeals	—	+93

Increases requested to provide for full cost of 1981 general schedule and January 1982 executive pay raises not funded in base amounts and for other increased support costs to maintain the current level of operations.

	FTE/T	Amount
Central Services	—	+180

Increase requested to maintain the current level of operations and provide for increased communications and other services general overhead support costs for the offices financed by this appropriation.

	FTE/T	Amount
Alaska Subsistence Grant	—	+60

Requested increase based on anticipated level of Federal and State participation in program during 1983.

	FTE/T	Amount
Office of Water Policy	+2	—

Increase requested to provide for full year level of effort of authorized staff in 1983 with additional cost to be absorbed in base resource levels.

APPROPRIATION: CONSTRUCTION MANAGEMENT

Summary of Requirements

(Dollar amounts in thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982/1983 Base Budget........			18	3,840
Program changes (changes to base budget, detailed below)........			—	-3,840
Total Requirements (1983 Estimate)			18	—

Comparison by Activity/Subactivity

	1982 Estimate		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Construction Management, TOTAL, APPROPRIATION	18	3,840	18	3,840	18	—	—	-3,840

Highlights of Budget Changes

	Change from Base	
	FTE/T	Amount
Construction Management	—	-3,840

In 1983 the Office will continue to assist the bureaus and Offices of the Department in improving their performance in planning, designing and operating facilities. No additional funds are requested to be appropriated in 1983, as unobligated balances estimated to be available will provide the required resources for the current staff to continue operations in 1983.

APPROPRIATION: INSPECTOR GENERAL

Summary of Requirements

(Dollar amounts in thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982			220	10,339
Adjustments to base and built-in changes:				
Transfers: Ethics function to "Departmental Management" ...	-3	-120		
Total, adjustments to base and built-in changes			-3	-120
1983 Base Budget			217	10,219
Program changes (Changes to base budget, detailed below)			+21	+1,181
Total Requirements (1983 Estimate)			238	11,400

Comparison by Activity/Subactivity

	1982 Estimate		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Inspector General, TOTAL APPROPRIATION 1/.....	217	10,219	217	10,219	238	11,400	+21	+1,181

1/ Amounts shown in 1982 reflect transfer.

APPROPRIATION: INSPECTOR GENERAL (Cont'd)

HIGHLIGHTS OF BUDGET CHANGES

	Change from Base FTE/T	Change from Base Amount
Inspector General	+21	+1,181

Additional resources requested will enable the office to continue to place emphasis in 1983 on the audit and investigation of departmental programs, providing leadership to promote economy and efficiency, and the prevention and detection of fraud, waste and abuse in the Department. Primary areas to be addressed will be based on the results of vulnerability analyses in process.

APPROPRIATION: YOUTH CONSERVATION CORPS

Summary of Requirements

(Dollar amounts in thousands)

	FTE/T	Amount	FTE/T	Amount
Appropriation currently available, 1982 1/			—	4,200
Adjustments to base and built-in changes:				
Adjustment for de-appropriation of funds made available under continuing resolutions authority	—	-4,200		
Total, adjustments to base and built-in changes			—	-4,200
1983 Base Budget			—	—

1/ Amounts made available for 1982 under continuing resolution authority.

	FTE/T	Amount
Program changes (Changes to base budget, detailed below)	—	—
Total Requirements (1983 Estimate)	—	—

Comparison by Activity/Subactivity

	1982 Estimate		1983 Base Budget		1983 Estimate		Change from Base	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Youth Conservation Corps, TOTAL APPROPRIATION	—	4,200	—	—	—	—	—	—

HIGHLIGHTS OF BUDGET CHANGES

	Change from Base FTE/T	Change from Base Amount
Youth Conservation Corps	—	—

As part of the President's economic recovery program, this program was to be terminated at the end of 1981. No funds were appropriated under Public Law 97-100, the Interior and Related Agencies Appropriations Act, 1982 and no funds are requested for 1983. Amounts reflected for 1982 were made available under continuing resolutions authority.

BUREAU OF RECLAMATION

The program of the Bureau of Reclamation is administered to assist the states, local governments, and other Federal agencies to stabilize and stimulate local and regional economies, protect the environment, and improve the quality of life through development of water and related land resources throughout the 17 contiguous western states and Hawaii. Reclamation projects provide for some or all of the following benefits: irrigation water service, municipal and industrial water supply, hydroelectric power generation, water quality improvement, fish and wildlife enhancement, outdoor recreation, and flood control.

SUMMARY OF BUREAU APPROPRIATIONS

(Dollar amounts in thousands)

Comparison of 1983 Estimate with 1982 Estimate:

	1982 Estimate		1983 Estimate		Change from 1982	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Appropriations:						
Loan Program	22	22,614	20	39,600	-2	+ 16,986
Construction Program	4,260	548,505	4,164	666,585	-96	+118,080
General Investigations.........	566	30,596	544	36,485	-22	+ 5,889
Emergency Fund	—	—	—	1,000	—	+ 1,000
Operation and Maintenance	2,549	118,518	2,463	140,850	-86	+ 22,332
General Administrative Expenses	925	39,928	888	49,300	-37	+ 9,372
Subtotal, Appropriations	8,322	760,161	8,079	933,820	-243	+173,659
Permanents, Trusts and Allocation Accounts:						
Miscellaneous Permanents	—	2,700	—	2,700	—	—
Reclamation Trust Funds........	28	8,352	27	13,800	-1	+ 5,448
Allocations from Job Corps and Bureau of Indian Affairs	308	—	255	—	-53	—
Subtotal, Permanents, Trusts and Allocation Accounts	336	11,052	282	16,500	-54	+ 5,448
TOTAL, BUREAU OF RECLAMATION	8,658	771,213	8,361	950,320	-297	+179,107

HIGHLIGHTS OF BUDGET CHANGES
(By appropriation)

	Change from 1982	
	FTE/T	Amount
APPROPRIATION: LOAN PROGRAM		
Under the Small Reclamation Projects Act work will continue on 9 projects and under the Distribution Systems Loans Act, work will continue on one project.	-2	+ 16,986
APPROPRIATION: CONSTRUCTION PROGRAM		
Construction work will continue on 70 projects and preconstruction work will continue on 2 projects. Increased funding will be needed on the following major items:	-96	+118,080
Central Arizona Project		
Columbia Basin Project		(+ 8,263)
McGee Creek Project		(+ 8,929)
Pick-Sloan Missouri Basin Projects		(+38,367)
Rehabilitation and Betterment Projects		(+16,912)
Drainage and Minor Construction		(+19,351)
Safety of Dams Program		(+ 5,963)
Colorado River Basin Salinity Control Projects		(+14,889)
Colorado River Storage Projects		(+32,699)
Other Projects		(+60,378)
Undistributed Reduction due to Anticipated Delays		(-15,928)
		(-71,743)

APPROPRIATION: CONSTRUCTION PROGRAM (Cont'd.)

Change from 1982	
FTE/T	Amount

The reserve for contingencies proposed in the President's Budget for 1983 includes an amount for initiation of construction on new Reclamation water resources projects. After consultation with local sponsors, a budget amendment will be proposed for a new construction start that meets the Administration's criteria for non-Federal financing and cost sharing and which is economically and financially sound.

APPROPRIATION: GENERAL INVESTIGATIONS

FTE/T	Amount
-22	+5,889

Funds will be provided for 58 investigations including 13 new studies throughout the 17 Western States with emphasis on energy production, municipal and industrial water supplies, and Indian water resource development. The 13 new studies are as follows:

1. Colorado Big-Thompson Hydroelectric Study, Colorado
2. Columbus Bend Water Supply, Texas
3. Crow Creek Indian Reservation, South Dakota
4. CRSP-Crystal Dam Powerplant, Colorado
5. Deep-Carbonate Aquifer Investigation, Nevada
6. Lake Meredith Salinity Control Project, New Mexico-Texas
7. Lower Colorado Water Supply Study, California
8. Minidoka Project, North Side Pumping Divn. Exten., Idaho
9. Prairie Bend Unit, Nebraska
10. Rapid City Water Supply, South Dakota
11. Shoshone Valley M&I Water Supply Study, Wyoming
12. Solar/Hydro Integration Project, Arizona, Nevada
13. Wasatch Front Total Water Management, Utah

Advance Planning work, formerly funded from the Construction Program, will be made a part of the General Investigations Program in 1983. This change will considerably shorten the time needed to complete a project. Eleven new advance planning studies are proposed for 1983. They are:

1. Anderson Ranch Powerplant, Boise Project - Idaho
2. Buffalo Bill Dam Modification, Shoshone Project - Wyoming
3. Buffalo Bill Dam Powerplant, Shoshone Project - Wyoming
4. Minidoka Powerplant, Minidoka Project - Idaho
5. Palisades Dam Powerplant, Palisades Project - Idaho
6. Yellowtail Afterbay Dam Powerplant - Montana
7. Lower Gunnison Basin Unit, Colorado River Water Quality Improvement Program - Colorado
8. McElmo Creek Unit, Colorado River Water Quality Improvement Program - Colorado
9. Palo Verde Irrigation District Unit, Colorado River Water Quality Improvement Program - California
10. Saline Water Use and Disposal Opportunities Unit, Colorado River Water Quality Improvement Program - Arizona, California, Colorado, Nevada, New Mexico, Utah, Wyoming
11. Unita Basin Unit, Colorado River Water Quality Improvement Program - Utah

APPROPRIATION: EMERGENCY FUND

FTE/T	Amount
--	+1,000

Funds will be requested to assure continuous operation of irrigation and power systems in event of emergencies.

APPROPRIATION: OPERATION AND MAINTENANCE

FTE/T	Amount
-86	-22,332

Operation and Maintenance work will be done on 32 projects. This work includes the operation and maintenance of power and reserve water works on Reclamation projects and associated land and water resource management activities.

APPROPRIATION: GENERAL ADMINISTRATIVE EXPENSES

Change from 1982	
FTE/T	Amount
-37	+9,372

Funds requested will finance the overall managerial responsibilities of the Bureau's program as performed in the Washington D.C. office, the Engineering and Research Center in Denver, Colorado, and the seven regional offices. Funds will also provide for the acquisition of the first stage of a 3-stage replacement of the central computer system. The present system is based on obsolete technology and is nearing complete obsolescence.

APPENDIX

BUREAU OF LAND MANAGEMENT

FY 1983 CONSTRUCTION PROGRAM

Budget Authority
($ in thousands)

State	Project Description	Total Estimated Cost	Available Through FY 1982	FY 1983 Request
Alaska Galena Fire Station	Design, purchase and install 1/2 mile of sewer pipeline from the Galena Fire Stations to an Airforce Sewage System.	126	—	126
Subtotal, ALASKA				126
California Senator Wash	Construct two comfort stations containing 1,100 sq. ft. which will serve 800 camping units.	1,447*	558	267
Subtotal, CALIFORNIA				267
New Mexico Organ Mountain	Construct 20 additional family units, 2 group units and a water distribution system.	—	—	325
Subtotal, NEW MEXICO				325
Total BLM				718

* Through 1993.

FISH AND WILDLIFE SERVICE

FY 1983 CONSTRUCTION PROGRAM

Budget Authority
($ in thousands)

WILDLIFE REFUGES

State	Project Description	Total Estimated Cost	Available Through FY 1982	FY 1983 Request
CALIFORNIA				
Kern NWR	Replacement of botulism hospital. Construct 40'x 25' covered treatment area, 40'x 25' shore and marsh bird recovery cage, 200' x 60' waterfowl recovery cage, septic field and incinerator.	60	—	60
San Francisco Bay NWR	Visitor facility safety improvement. Install sprinkler system, rehab road and parking lot, build escape route, and post safety hazards.	214	—	214
San Luis NWR	Visitor safety improvement. Cover or fence water pumps, install guardrail and bulkhead along tour road, and rehab foot bridge.	143	—	143
San Pablo Bay NWR	Rehab of Lower Tubbs Dike. Install 7 water control structures. Raise and widen 2.0 miles of dike. Gravel 1.0 mile of dike for access. Clean out 5 miles of ditch.	200	—	200
Subtotal, CALIFORNIA				617
DELAWARE				
Prime Hook NWR	Rehab of marsh. Aerially spray marsh (about 1,700 acres) to eliminate phragmites to reestablish desirable plants.	170	—	170
Subtotal, DELAWARE				170
HAWAII				
Hanalei NWR	Rehab of water delivery system for endangered birds. Install 1,930 ft. of 60" corrugated pipe and construct silting basin.	400	—	400
James Campbell NWR	Development of habitat for endangered birds. Complete 300' of dike, install 2 additional water control structures, construct 100 nesting islands and rehab fence and access roads.	108	—	108
Kakahaia NWR	Development and rehab of habitat for endangered birds. Remove 10 acres of bulrush, complete perimeter fence (500'), and complete 2 acre pond with nesting islands.	153	—	153
Subtotal, HAWAII				661
KANSAS				
Quivira NWR	Replacement of bridge. Replace wooden bridge with 22' x 60' bridge capable of handling greater weight and two-way traffic.	150	—	150
Subtotal, KANSAS				150

State	Project Description	Total Estimated Cost	Available Through FY 1982	FY 1983 Request
MAINE				
Moosehorn NWR	Rehab of roads. Gravel about 8 miles of refuge and install needed culverts.	50	—	50
Subtotal, MAINE				50
MASSACHUSETTS				
Monomoy NWR	Rehab of Monomy lighthouse. Install vandal-resistant doors and locks, steel grills, Lexan windows, new siding and roof, and foundation supports.	150	—	150
Subtotal, MASSACHUSETTS				150
MONTANA				
Benton Lake NWR	Rehab of Lake Creek Ditch. Redesign and rip-rap sections of 10-mile long ditch (about 1,300 cu. yds. of rip-rap).	60	—	60
NW Montana Wetland Management District	Development of new waterfowl production areas. Fence five miles of boundary, plug ditches, repair dikes and water control structures and remove old fences and buildings.	46	—	46
Subtotal, MONTANA				106
NEVADA				
Moapa Valley NWR	Rehab of habitat. Remove existing man-made structures to provide habitat for endangered Moapa Dace.	87	—	87
Pahranagat NWR	Rehab of Upper Lake cross dike. Reface dike with 1,896 cu. yds. of rip-rap.	44	—	44
Ruby Lake NWR	Upgrade of water control system. Replace/enlarge 8 water control structures.	30	—	30
Subtotal, NEVADA				161
NEW JERSEY				
Brigantine NWR	Rehab of public boat ramps. Replace existing ramps with concrete ramps, replace and extend bulkhead, install catwalk (105' x 4') and enlarge parking lot (75' x 35').	125	—	125
Subtotal, NEW JERSEY				125
NEW MEXICO				
Bosque del Apache NWR	Replacement of irrigation gates. Replace 10-12 control gates and culverts and add 3 new ones.	40	—	40
Subtotal, NEW MEXICO				40
NEW YORK				
Iroquois NWR	Rehab of dike. Rehab 1/4 mile of dike and construct an emergency spillway.	100	—	100
Subtotal, NEW YORK				100

State	Project Description	Total Estimated Cost	Available Through FY 1982	FY 1983 Request
NORTH DAKOTA				
Audubon	Fencing and rehab of habitat. Fence 30 miles of boundary and construct 12 low level dikes.	205	—	205
Des Lacs NWR	Rehab of bypass ditch. Reshape, rip-rap, and clean out 0.7 miles of bypass ditch and rip-rap around 5 water control structures.	56	—	56
J. Clark Salyer	Rehab of habitat. Establish dense nesting cover for waterfowl (about 2,000 acres).	130	—	130
Subtotal, NORTH DAKOTA				391
OHIO				
Ottawa NWR	Rehab of exterior dike. Raise and widen and rip-rap about 1.2 miles of dike (118,000 cu. yds. of fill and 50,000 tons of rip-rap).	1,225	—	1,225
Subtotal, OHIO				1,225
OKLAHOMA				
Wichita Mts. NWR	Rehab of Lake Elmer Thomas Dam. Remove existing water control structure, replace rip-rap on downstream side of dam, rehab floodgate and add extra outlet, and increase capacity of south spillway.	530	—	530
Subtotal, OKLAHOMA				530
SOUTH DAKOTA				
Karl Mundt NWR	Preservation of eagle roost. Stabilize about 3,600 ft. of Missouri River bank.	753	450	303
Lacreek NWR	Rehab of dike. Rip-rap three dikes (1,130 cu. yds. of rip-rap).	70	—	70
Sand Lake NWR	Protection of shoreline. Rip-rap eight areas (about 600 cu. yds. of rip-rap).	25	—	25
SD Wetland Management Districts	Rehab of new waterfowl production areas. Plug drainage ditches, build low dikes, and install water control structures. Establish native grasses, remove old structures, and build parking areas for public access.	90	—	90
Subtotal, SOUTH DAKOTA				488
TEXAS				
Anahuac NWR	Rehab of marsh canals. Clean out 27,000 ft. of ditches.	95	—	95
Aransas NWR	Replacement of equipment trailer. Purchase Lo-boy, fifth wheel design, 40-ton capacity trailer.	18	—	18
Brazoria NWR	Rehab of dikes, water control structures, and roads. Rehab 1.7 miles of dike and repair water control structures. Backfill and rip-rap 1,800 ft. of shoreline and rehab refuge service road.	169	—	169

State	Project Description	Total Estimated Cost	Available Through FY 1982	FY 1983 Request
Hagerman NWR	Rehab water control structures. Replace five water control structures and install one additional outlet.	53	—	53
Laguna Atascosa NWR	Rehab of dike, roads and fences. Rehab 1.0 mile of dike, rehab 2.7 miles of service roads, and repair 2.5 miles of boundary fences.	301	—	301
Santa Ana NWR	Rehab of marsh canal. Remove existing water pipeline and culverts. Install new water control structure and construct a 10'x 5' x 1,100' concrete lined canal.	62	—	62
Subtotal, TEXAS				698
UTAH				
Fish Springs NWR	Rehab of dike. Rip-rap 4,500 ft. of five-foot high dike and excavate potholes on 250 acres.	78	—	78
Subtotal, UTAH				78
VERMONT				
Missisquoi NWR	Rehab of barge facility. Rehab barge slip on both sides of river with 40 ft. of bulkheading and dredge additional 4 ft. (about 700 cu. yds.) Replace barge with smaller model (16' x 35').	50	—	50
Subtotal, VERMONT				50
WASHINGTON				
McNary NWR	Rehab of habitat. Install 3 water control structures and build 65 ft. of 10-foot high dike and 255 ft. of 4-foot high dike. Install electric fish guards. Rotenone Burbank Slough (500 acres). Purchase equipment trailer and rip-rap 3 miles of shoreline.	261	—	261
Ridgefield NWR	Rehab of River "S" facility. Install self-cleaning fish screens, widen bridge, replace pump intake, complete water control structures, lower pump sumps, and construct trash screens for pumps.	170	—	170
Subtotal, WASHINGTON				431
WISCONSIN				
Trempealeau NWR	Rehab of dike. Remove upper and lower locks, plug dike and restore original contour. Install three 5-foot slide gates with culverts.	386	—	386
Subtotal, WISCONSIN				386
		TOTAL, WILDLIFE REFUGES		6,607

FISH HATCHERIES

State	Project Description	Total Estimated Cost	Available Through FY 1982	FY 1983 Request
COLORADO				
Leadville	Rehabilitate concrete raceways. Replace water supply and drain lines.	434	—	434
Leadville	Repair main hatchery building. Replace water supply and drain lines, repair floor and walls.	219	—	219
Subtotal, COLORADO				653
MICHIGAN				
Hiawatha Forest	Construct settling pond for effluent treatment. Purchase truck and associated equipment.	650	—	650
Pendills Creek	Construct effluent treatment facilities. Purchase tank truck and associated equipment.	586	—	586
Subtotal, MICHIGAN				1,236
NORTH DAKOTA				
Garrison Dam	Replace 12 concrete raceways. Replace water supply and drain lines.	372	—	372
Subtotal, NORTH DAKOTA				372
SOUTH DAKOTA				
McNenny	Replace hatchery building floor, water supply, and drain lines. Repair hatchery tanks.	340	—	340
Subtotal, SOUTH DAKOTA				340
WASHINGTON				
Quilcene	Construct pollution abatement facilities. Acquire necessary land. Purchase equipment.	647	—	647
Quilcene	Replace 6 raceways. Replace water supply, drain lines.	225	—	225
Subtotal, WASHINGTON				872
WISCONSIN				
Genoa	Replace 10 concrete pond kettles and associated water supply and drain lines.	216	—	216
Subtotal, WISCONSIN				216
WYOMING				
Jackson	Repair and replace concrete walls on raceways	149	—	149
Subtotal, WYOMING				149
	TOTAL, FISH HATCHERIES			3,838

RESEARCH FACILITIES

State	Project Description	Total Estimated Cost	Available Through FY 1982	FY 1983 Request
MARYLAND				
Patuxent Wildlife Research Center	Rehab of facilities. Install 100,000 gal. tank, clean well filtration. Replace water delivery pipes and filtering equipment.	630	—	630
Subtotal, MARYLAND				630
MICHIGAN				
Great Lakes Fishery Laboratory	Replace laboratory roof. Includes additional insulation and associated mechanical work	119	—	119
Hammond Bay Biological Station	Construct toxic waste holding and treatment facility.	875	—	875
Subtotal, MICHIGAN				994
	TOTAL, RESEARCH FACILITIES			1,624

DAM SAFETY

State	Project Description	Total Estimated Cost	Available Through FY 1982	FY 1983 Request
MULTI-STATE PROJECT	Conduct inspections of approximately 230 dams with potential hazard to human life and private property in the event of failure	1,239	623	636
	TOTAL, DAM SAFETY			636
	GRAND TOTAL, FISH AND WILDLIFE SERVICE CONSTRUCTION			12,703

NATIONAL PARK SERVICE

FY 1983 CONSTRUCTION PROGRAM

REGULAR CONSTRUCTION PROGRAM

Budget Authority
($ in thousands)

State	Project Description	Total Estimated Cost	Available Through FY 1982	FY 1983 Request
Alaska				
Denali National Park and Preserve	Provide underground fuel storage facilities including two 12,000-gallon tanks, a 6,000-gallon unleaded gasoline tank and 4,000-gallon stove oil tank. Provide fuel delivery and bulk transfer facility. (Package 116)	950	—	950
Glacier Bay National Park and Preserve	Rehabilitate Bartlett Cove dock including new gangways, finger piers, dock extension, safer fuel handling and storage facilities, seaplane float, and related mechanical facilities. (Package 106)	1,170	—	1,170
Subtotal, Alaska	....			2,120
Arizona				
Grand Canyon National Park	Install desander units, flexible pipe fittings, replace control valves, modify high-pressure lines, pump supports and other repairs and modifications, Roaring Springs pumphouse. (Package 411)	406	—	406
Montezuma Castle National Monument	Construct new sewage disposal system including 1-acre lagoon, sewage lift station, and force main. (Package 124)	393	—	393
Subtotal, Arizona	....			799
California				
Yosemite National Park	Construct fire protection system for the Wawona Hotel complex. Includes installation of a water storage tank, distribution lines, fire hydrants, sprinkler system, and fire detection systems. (Package 363)	2,358	—	2,358
Subtotal, California	....			2,358
Colorado				
Rocky Mountain National Park	Rehabilitate three water systems to Public Health Service standards by conversion to well water supplies. Replace deteriorated portions of water distribution systems. (Package 232)	1,518	—	1,518
Subtotal, Colorado	....			1,518
District of Columbia				
National Capital Parks-Central	Repair Kutz Bridge approaches, guardrails, gutters, curbs, sidewalks, main decking, and paint steel superstructure. (Package 427)	3,900	—	3,900
Rock Creek Park	Rehabilitate and repair approximately 5,000 feet of streambank and retaining walls along Piney Branch Parkway and Beach Drive near Klingle Road. (Package 206)	1,724	—	1,724
Subtotal, District of Columbia	....			5,624

Indiana				
George Rogers Clark National Historic Site	Repair roof, repoint masonry walls and columns, clean granite and limestone surfaces, George Rogers Clark Memorial. (Package 119)	670	—	670
Subtotal, Indiana	....			670
New York				
Gateway National Recreation Area	Replace steel bulkhead, riprap and subsurface fill, approximately 5,000 linear feet of seawall, Great Kills area. (Package 149)	7,494	—	3,673
Subtotal, New York	....			3,673
Pennsylvania				
Allegheny Portage Railroad National Historic Site	Replace unsafe maintenance facility with 3,000 square foot structure, water and sewer lines, gas, electrical and telephone connections. (Package 115)	499	—	499
Subtotal, Pennsylvania	....			499
Utah				
Glen Canyon National Recreation Area	Complete Dangling Rope Marina and support facilities transfer from Rainbow Bridge site. Project includes utilities, service buildings, employee housing, marina access ramp and float. (Package 281)	8,217	4,197	3,883
Subtotal, Utah	....			3,883
Virginia				
Booker T. Washington National Monument	Install fire alarm in visitor center/headquarters building, environmental study center and residence. Provide underground power service. (Package 101)	87	—	87
Prince William Forest Park	Replace 1,700 feet of gas line and replace 7,500 feet of electrical lines with underground cables, Cabin Camp 1. (Package 135)	555	—	555
Shenandoah National Park	Reconstruct portions of the South District of the Skyline Drive. Includes repair or replacement of culverts, drainage systems, guard walls, and roadway base and cribbing. (Package 125)	19,000	—	4,001
Subtotal, Virginia	....			4,643
Washington				
North Cascades National Park	Rehabilitate water and sewer systems, Diablo Lake. Includes replacement of water distribution system, new septic tank, collection lines, filtration system and fire hydrant with lake intake. (Package 269)	668	—	668
Olympic National Park	Phase II, Lake Crescent Highway reconstruction. Involves widening of roadway to 28 feet, reconstruction of curves to no more than 20 degrees, installation of guardrail and some realignment. Approximately 4.2 miles of highway (Package 261)	11,500	5,429	4,061
Subtotal, Washington	....			4,729
Wyoming				
Grand Teton National Park	Improve day use facilities including new water system, public restrooms, fish-cleaning station, marina service buildings, and a floating breakwater, Leeks Lodge area. (Package 104)			1,861
Grand Teton National Park	Reconstruction of 7.5 miles of road from Colter Bay to the north boundary of the park. Widen and repave roadway and shoulders, correct numerous subgrade failures and other road improvements. (Package 201)	3,013	—	3,013

Grand Teton National Park	Improvements to Beaver Creek-Moose water system. Includes drilling new well, installation of pumphouse and chlorinator, water distribution line improvements and construction of 30,000-gallon water reservoir. (Package 310)	476	—	476
Yellowstone National Park	Rehabilitate purchased concessioner facilities, phase III. In fiscal 1983, work includes kitchen renovation, structural, mechanical and electrical repairs to Lake and Roosevelt Lodges, dormitory renovation, and construction of two staff dormitories. (Package 620)	NA	16,796	7,499
Subtotal, Wyoming				12,847
Unallocated by State				
National Visitor Center, Washington, D.C.	Restoration of funding for projects temporarily deferred in fiscal 1982 to fund completion of roof repairs, National Visitor Center (Public Law 97-125, approved December 29, 1981)			3,189
Subtotal, Unallocated by State				3,189
Subtotal, Regular Fiscal 1983 Construction Program				46,552

NATIONAL PARK SERVICE

FY 1983 CONSTRUCTION PROGRAM

PRIP CAPITAL IMPROVEMENT PROJECTS (CONSTRUCTION)

Budget Authority
($ in thousands)

State	Project Description	Total Estimated Cost	Available Through FY 1982	FY 1983 Request
Arizona				
Petrified Forest National Park	Reconstruct approximately 6.1 miles of the deteriorated Mainline Road. Includes subgrade repairs, new drainage structures and paved shoulders. (Package 140)	2,882	—	2,882
Petrified Forest National Park	Construct 250 foot metal retaining wall along the Puerco River to prevent erosion. (Package 150)	295	—	295
Wupatki National Monument	Reconstruct deteriorated sections of the main loop road through Wupatki and Sunset Crater National Monuments (approximately 17 miles). (Package 103)	3,303	—	3,303
Subtotal, Arizona				6,480
Arkansas				
Buffalo National River	Rebuild 1.2 miles of loop roads including drainage structures and paved shoulders. Reconstruct 73 campsites including retaining walls, water hydrants, and power. (Package 164)	927	—	927
Subtotal, Arkansas				927
California				
Point Reyes National Seashore	Replace existing wooden water storage tanks with an underground 30,000 gallon concrete tanks and new transmission lines. (Package 191)	426	—	426
Subtotal, California				426
Colorado				
Mesa Verde National Park	Build new 5.3 mile entrance road to Mesa Verde National Park. Includes $200,000 for right-of-way acquisition. (Package 101)	8,621	—	8,621

Mesa Verde National Park	Construct 11 shelters of various sizes (approximately 45,300 square feet total area) to protect prehistoric Indian surface ruins atop Chapin and Wetherill Mesas. (Package 117)	4,144	—	4,144
Rocky Mountain National Park	Reconstruct 11-mile portion of Trail Ridge Road with parking areas and access spurs. (Package 106)	8,940	—	8,904
Subtotal, Colorado	....			21,669
Hawaii				
Haleakala National Park	Construct headquarter's water and fire protection system including 262,000 gallon storage reservoir, pumping station, fire hydrants, distribution system and solar water heating system. (Package 821)	2,096	—	2,096
Hawaii Volcanoes National Park	Widen and resurface 4.0 miles of two-lane road from the junction of Crater Rim Drive to the new Chain of Craters Road. (Package 110)	1,572	—	1,572
Subtotal, Hawaii	....			3,668
Minnesota				
Voyageurs National Park	Construct initial visitor developments consisting of breakwater, docks, contact station, utilities, and restrooms, Black Bay. (Package 158)	2,690	—	2,690
Subtotal, Minnesota	....			2,690
Missouri				
Jefferson National Expansion Memorial National Historic Site	Restoration and preservation of exterior walls, Old Saint Louis Courthouse. (Package 201)	2,266	—	2,266
Subtotal, Missouri	....			2,266
Nebraska				
Scotts Bluff National Monument	Connect park water system to municipal system by constructing approximately 10,000 feet of waterline and pump station. (Package 111)	507	—	507
Subtotal, Nebraska	....			507
New Jersey				
Gateway National Recreation Area	Rehabilitate and reconstruct approximately 6 miles of road and repave parking facilities for 1,000 vehicles, Fort Hancock area. (Package 150)	1,965	—	1,965
Subtotal, New Jersey	....			1,965
New Mexico				
Chaco Culture National Historical Park	Realign, reconstruct and pave approximately 8.9 miles of dirt tour road and .5 miles of service road, employee residential and maintenance area. (Package 139)	2,751	—	2,751
Subtotal, New Mexico	....			2,751
New York				
Martin Van Buren National Historic Site	Structural reinforcements, mechanical and electrical systems rehabilitation, interior restoration and fire and intrusion alarms, main house, Lindenwald Estate. (Package 102)	1,875	—	8
Subtotal, New York	....			878
North Carolina				
Cape Hatteras National Seashore	Install approximately 150 feet of groin to prevent beach erosion, Cape Hatteras Lighthouse. (Package 175)	1,200	—	1,200
Subtotal, North Carolina	....			1,200

North Dakota				
Theodore Roosevelt National Park	Reconstruct 6 miles of north unit entrance road and reconstruct Squaw Creek Bridge. (Package 148)	4,043	—	4,043
Subtotal, North Dakota	....			4,043
Ohio				
Perry's Victory and International Peace Memorial	Repair shaft, waterproof upper plaza, upgrade electrical, mechanical and water supply systems, memorial structure. (Package 101)	4,814	2,370	2,444
Subtotal, Ohio	....			2,444
Oklahoma				
Chickasaw National Recreation Area	Reconstruct and seal coat approximately 7.5 miles of roadway including sections of campground road and boat launch ramp approaches. (Package 150)	1,725	—	1,725
Subtotal, Oklahoma	....			1,725
Tennessee				
Great Smoky Mountains National Park	Remove unsafe bridge and construct two bridges on the Tremont Environmental Education Center entrance road. One bridge to be 150 feet in length, the second 125 feet. (Package 266)	1,480	—	1,480
Subtotal, Tennessee	....			1,480
Texas				
Amistad Recreation Area	Upgrade utility systems including construction of a water and sewage system, distribution lines, and expanded electrical system. Construct small comfort station and fish-cleaning station, Pecos Canyon. (Package 124)	876	—	876
Guadalupe Mountains National Park	Construct high-country trail over the Guadalupe escapement to existing approach trails (approximately 24 miles). (Package 110)	3,720	2,056	1,664
Padre Island National Seashore	Reconstruct and resurface approximately 9 miles of roadway including main entrance road, service roads, and North Beach access road. (Package 156)	1,136	—	1,136
Subtotal, Texas	....			3,676
Virginia				
Shenandoah National Park	Repair base and cribbing, realign dangerous sections, repair drainage structures and guardrails; approximately 35 miles of the Central District, Skyline Drive. (Package 118)	13,200	1,215	2,160
Subtotal, Virginia	....			2,160
Subtotal, Park Restoration and Improvement Program Capital Improvement Projects				60,955
Total, Fiscal 1983 Construction Program				107,507

BUREAU OF INDIAN AFFAIRS

FY 1983 Construction Program

Budget Authority
($ in thousands)

State	Project Description	Total Estimated Cost	Available Through FY 1982	FY 1983 Request
Arizona	Funds for Phase I construction of the Hopi Jr.-Sr. High School. This phase to include academic facilities, furnishings & equipment, redesign, site work, contingencies and supervision. Phase I includes road access and preliminary site grading at a cost of $364,690. Phase I total expenditures are estimated at $20,155,310. Phase II is estimated at $9,844,690, and includes construction of staff housing and related site improvements.	30,000.0	5,155.3	15,000.0
Multi-State Projects Allocated below by BIA Area; Unallocated by State)	Facility Improvement & Repair program to reduce critical life safety needs; consolidate and/or close underutilized facilities: repair facilities to adequately maintainable standards; upgrade facilities to meet codes and regulations, e.g. energy, handicap, safety, etc.	456,000.0	38,400.0	45,100.0
Aberdeen Area (N. Dakota, S. Dakota, Nebraska)				7,570.5
Albuquerque Area (Colorado, N. Mexico)				2,092.1
Anadarko Area (Kansas, Oklahoma)				1,508.8
Billings Area (Montana, Wyoming)				932.8
Eastern Area (Florida, Louisana, Mississippi)				1,144.2
Juneau Area (Alaska)				3,397.6
Muskogee Area (Oklahoma)				781.8
Navajo Area (Arizona, N. Mex., Utah)				15,777.2
Phoenix Area (Arizona, California, Nevada, Utah)				4,705.3
Portland Area (Idaho, Oregon, Washington)				1,189.7
Other (Emergency Repairs, Boiler Repairs, Advance Planning & Design)				6,000.0
TOTAL CONSTRUCTION, BUILDINGS & UTILITIES, BIA				60,100.0

BUREAU OF INDIAN AFFAIRS (CONTINUED)

FY 1983 Irrigation Systems Program

Budget Authority
($ in thousands)

State	Project Description	Total Estimated Cost	Available Through FY 1982	FY 1983 Request
Arizona	Ak Chin Project - consists of conveyance system and appurtenant facilities, wells, pumps, and collection system; electrical system and on-reservation well operation.	89,000.0 a/	28,260.0	[29,800.0]
	Cocopah Project - Construction of 9.5 miles of concrete lined ditches including turnouts, checks and road crossings.	2,800.0	1,200.0	1,600.0
	Fort McDowell Project - Water Distribution System; Sprinklers and supporting facilities.	2,200.0	480.0	1,700.0
	White Mountain Project - Embankment of a reservoir which will store water for irrigation purposes.	4,600.0	1,440.0	3,100.0
Nevada	Fallon Project - Subjugation (on-farm clearing leveling and farm distribution system).	7,000.0	5,840.0	1,000.0
North Dakota	Fort Yates Unit - Provide pipelines and electrical system; sprinkler equipment.	2,000.0	960.0	1,000.0
South Dakota	Grass Rope Project - Pipe distribution systems, sprinkler system and related facilities.	9,460.0	2,996.0	2,600.0
Bureau-wide	Dam Safety Program - Inspection and evaluations of high and significant hazard dams by reimbursable agreement with BurRec; structural modifications of high risk dams; inspection of low hazard dams and coordination by Bureau of Indian Affairs personnel.	unknown	6,912.0	3,100.0
	Engineering & Supervision - provides funds for project engineering, design and construction supervision.	annual cost	2,295.0	2,000.0
TOTAL IRRIGATION CONSTRUCTION, BIA				16,100.0

a/ Total estimated construction cost (FY 1982 dollars), additional authorization required, proposed for later transmittal, shown as non-add on this table.

TERRITORIAL AND INTERNATIONAL AFFAIRS

FY 1983 CONSTRUCTION PROGRAM

Budget Authority
($ in thousands)

State	Project Description	Total Estimated Cost	Available Through FY 1982	FY 1983 Request
AMERICAN SAMOA				
Afono/Vatia	Roadway excavation and drainage as part of a staged program. Current road is classified as pioneer road.	500	—	375
Pago Pago	Purchase of tugboat.	900	—	675
Pago Pago and Other locations	School improvements. Renovation and repair work on several schools will include repair of cooling systems, screens, canvas.	575	—	430
Subtotal, AMERICAN SAMOA	....			1,480
GUAM				
Cabras Island	Dry dock fishing vessel docking facility. Construction of 400 feet of wharf and dredging of berthing area.	1,467	—	1,100
Dededo/Mangilao	Water transmission line. Design and construction of 8,000 linear feet of 16-inch water pipeline.	773	—	580
Windward Hills	Water transmission line. Design and construction of 13,000 linear feet of 16-inch water pipeline.	1,257	—	940
Yona/Chanlan Pago	Water transmission line. Design and construction of 8,300 linear feet of 16-inch water pipeline.	822	—	545
Subtotal, GUAM	....			3,165
MARSHALL ISLANDS				
Majuro	Capitol relocation. First increment of construction funding for new capitol facilities.	— —	— —	(—) —
Subtotal, MARSHALL ISLANDS	....			—
NORTHERN MARIANA ISLANDS				
Garapan, Saipan	Hospital facilities. Initiation of construction funding for new hospital facilities.	25,200	1,296	4,000
Subtotal, NORTHERN MARIANA ISLANDS	....			4,000
PALAU				
Koror	Capitol relocation. First increment of construction funding for new capitol faciliites	—	—	(—)
Subtotal, PALAU	....			—

TERRITORIAL AND INTERNATIONAL AFFAIRS

FY 1983 CONSTRUCTION PROGRAM

Budget Authority
($ in thousands)

State	Project Description	Total Estimated Cost	Available Through FY 1982	FY 1983 Request
PONAPE, FSM Pylikir	Capitol relocation. First increment of construction funding for new capitol facilities	—	—	(—)
Subtotal, PONAPE, FSM.				—
Multi-State Projects (Unallocated by State)	Capitol relocation funding for Marshall Islands, Palau, FSM. First increment has not been allocated by entity.	21,000	2,880	7,800
Subtotal, Multi-State Projects				7,800
TOTAL, TERRITORIAL & INTERNATIONAL AFFAIRS				16,445

BUREAU OF RECLAMATION

CONSTRUCTION PROGRAM
(Dollars in Thousands)

Projects	Authorized Construction Development/ Acquisition Ceiling	Amount Available Through FY 1982	Authorization Remaining	FY 1983 Request	Amount Request Requiring Additional Authorization
Major Construction:					
California				(39,970)	
Central Valley Project					
Auburn-Folsom South Unit	1,382,862	321,558	1,061,304	5,000	—
Misc. Project Programs	—	843,549	—	3,770	—
Sacramento River Division	—	271,748	—	11,856	—
San Felipe Division	359,430	105,394	254,036	38,178	—
San Luis Unit	760,258	468,961	291,297	1,166	—
Colorado				(117,351)	
Dallas Creek Project	1/	40,492	—	38,829	—
Dolores Project	1/	100,227	—	45,714	—
Fryingpan Arkansas Project	647,509	446,792	200,717	12,707	—
San Luis Valley, Closed Basin	75,105	8,066	67,039	4,798	—
Title II, Grand Valley Unit	2/	27,862	—	8,902	—
Title II, Paradox Valley Unit	2/	9,430	—	6,401	—
Nebraska				(39,554)	
P-SMBP, North Loup Division	231,446	46,429	185,017	38,854	—
P-SMBP, O'Neill Unit	329,728	6,714	323,014	700	—
Nevada				(2,973)	
Southern Nevada Water Project	176,848	169,202	7,646	2,000	—
Title II, Las Vegas Wash Unit	2/	3,349	—	973	—
New Mexico				(4,000)	
Brantley Project	243,046	10,086	232,960	4,000	—
Oklahoma				(53,077)	
McGee Creek Project	160,938	30,115	130,823	53,077	—
South Dakota				(100)	
P-SMBP, Oahe Unit	490,590 3/	41,453	449,137	100	—
Texas				(5,091)	
Nueces River Project	97,783	72,945	24,838	5,091	—
Utah				(86,872)	
CUP, Bonneville Unit	4/	355,010	—	79,623	—
CUP, Jensen Unit	4/	32,184	—	6,249	—
CUP, Upalco Unit	4/	6,581	—	1,000	—
Washington				(67,079)	
Chief Joseph, Oroville-Tonasket Unit	68,503	18,023	50,480	16,700	—
Columbia Basin, Irrig. Facil.	—	1,442,756	—	18,779	—
Columbia Basin, Third Powerplant	1,051,033	579,545	471,488	31,600	—
Wyoming				(6,450)	
P-SMBP, Riverton Unit	45,424	30,463	14,961	6,450	—
Multi-State Projects				(222,987)	
Central Arizona Project (AZ, CA, NM, NV, UT)	2,659,444	932,359	1,727,085	160,990	—
CRBSCP, Title I Division (AZ, CA)	453,659	193,189	260,470	44,329	—
P-SMBP, Garrison Diversion Unit (ND, SD)	1,095,363	159,961	935,402	4,000	—

Projects	Authorized Construction Development/ Acquisition Ceiling	Amount Available Through FY 1982	Authorization Remaining	FY 1983 Request	Amount Request Requiring Additional Authorization
Multi-State Project (Cont'd) Section 8, Recreational, Fish and Wildlife Facil. (CO, NM, UT, WY)	1/4/	90,923	—	13,668	—
Drainage and Minor Construction:				(19,364)	
Boise Project, Payette Divn. (ID)	—	25,997	—	620	—
Chief Joseph, Whitestone Coulee Unit (WA)	10,981	7,651	3,330	765	—
Gila Project, Welton-Mohawk (AZ)	—	73,813	—	1,000	—
Klamath Project (OR, CA)	—	32,292	—	1,989	—
Little Wood River Project (ID)	2,807	2,381	426	115	—
Misc. Engineering Service (CO)	—	365	—	10	—
Modifications and Additions to Completed Project Facilities	—	10,452	—	3,595	—
Mountain Park Project (OK)	54,678	41,266	13,412	100	—
Palmetto Bend Project (TX)	104,735	70,905	33,830	309	—
P-SMBP, East Bench Unit (MT)	—5/	22,885	—	79	—
P-SMBP, Farwell Unit (NB)	—5/	39,327	—	1,100	—
P-SMBP, Owl Creek Unit (WY)	—5/	6,565	—	40	—
Recreation Facil. at Exist. Res.	—	1,624	—	16	—
San Angelo, Twin Buttes Dam (TX)	62,805	31,157	31,648	2,074	—
San Juan-Chama Project (CO, NM)	168,082	73,707	94,375	200	—
Tualatin Project (OR)	67,209	54,544	12,665	510	—
Washita Basin, Foss Dam (OK)	48,909	31,463	17,446	3,000	—
Washoe Project (CA, NV)	183,297	34,724	148,573	3,542	—
Weber Basin Project (UT)	—	94,354	—	300	—
Preconstruction Planning:				(1,000)	
CUP, Uintah Unit	178,491	4,650	173,841	500	—
P-SMBP, Narrows Unit	297,747	5,858	291,889	500	—
Rehabilitation and Betterment:				(26,632)	
Carlsbad Project (NM)	—	5,326	—	350	—
Grand Valley, Orchard Mesa Division (CO)	—	318	—	2,150	—
Huntley Project, (MT)	—	967	—	800	—
Okanogan Project, Okanogan Irrigation District (WA)	—	—	—	500	—
P-SMBP, Frenchman-Cambridge Division (NB)	—	3,870	—	529	—
P-SMBP, Helena Valley Unit (MT)	—	—	—	400	—
Shoshone Project, Frannie Divn. (WY)	—	200	—	350	—
Shoshone Project, Heart Mountain Division (WY)	—	600	—	700	—
Shoshone Project, Willwood Divn. (WY)	—	883	—	335	—
Strawberry Valley Unit (UT)	—	—	—	300	—
Sun River Project, Greenfields Division (MT)	—	5,437	—	1,440	—
Uncompahgre Project, (CO)	—	1,136	—	1,128	—
Yakima Project, Grandview Irrigation District (WA)	—	10	—	5	—
Yakima Project, Granger Irrig. District (WA)	—	—	—	50	—
Yakima Project, Outlook Irrig. District (WA)	—	25	—	400	—
Yakima Project, Sunnyside Board of Control (WA)	—	10	—	145	—
Yakima Project, Sunnyside Valley Irrigation District (WA)	—	75	—	200	—
Yakima Project, Yakima-Tieton Irrigation District (WA)	—	3,600	—	16,850	—

BUREAU OF RECLAMATION

Projects	Authorized Construction Development/ Acquisition Ceiling	Amount Available Through FY 1982	Authorization Remaining	FY 1983 Request	Amount Request Requiring Additional Authorization
Safety of Dams Program:				(25,828)	
Boise Project, Black Canyon Dam (ID)	—6/	279	—	750	—
Department of the Interior Dam Safety Program	—	700	—	700	—
Hyrum Project, Hyrum Dam (UT)	—6/	1,458	—	4,888	—
Milk River Project, Lake Sherburne Dam (MT)	—6/	3,055	—	1,400	—
Minidoka Project, Island Dam (ID)	—6/	2,435	—	500	—
Minidoka Project, Jackson Lake Dam (WY)	—6/	2,904	—	2,000	—
Modification Reports and Preconstruction Planning	—6/	6,507	—	5,910	—
Newlands Project, Lahontan Dam (NV)	—6/	1,352	—	2,400	—
Orland Project, East Park Dam (CA)	—6/	149	—	220	—
Orland Project, Stony Gorge Dam (CA)	—6/	803	—	500	—
Rapid Valley Project Deerfield Dam (SD)	—6/	2,024	—	4,420	—
Salt River Project, Stewart Mountain Dam (AZ)	—6/	325	—	200	—
Sun River Project, Willow Creek Dam (MT)	—6/	1,542	—	1,940	—
Underfinancing	—	—	—	-71,743	—
TOTAL				666,585	

1/ Included as part of the authorized Appropriation ceiling, $1,432,719,000 for the Colorado River Storage Project Under Public Law 90-537.

2/ Included as part of the authorized Appropriation ceiling, $305,046,000 for the Colorado River Basin Salinity Control Projects under Public Law 93-320.

3/ Based on January 1977 Price Indexing. P-SMBP, Oahe Unit is not presently under construction.

4/ Included as part of the authorized Appropriation ceiling, $2,529,287,000 for the Colorado River Storage Project under Public Law 84-485 and Public Law 92-370.

5/ Included as part of the authorized Appropriation ceiling for the Pick-Sloan Missouri Basin Program under Public Law 92-371. The total amount authorized to complete the balance of the program is $112,266,000.

6/ Included as part of the authorized Appropriation ceiling, $100,000,000 for the Safety of Dams Program under the Reclamation Safety of Dams Act of 1978, Public Law 95-578.

FY 1983 LAND ACQUISITION

Budget Authority

(Dollar amounts in thousands)

Location/Description	Amount
National Park Service	
CALIFORNIA	
Lassen Volcanic NP....................	5,500
Subtotal, CALIFORNIA............	5,500
FLORIDA	
Big Cypress NPres....................	14,000
Gulf Islands NS........................	3,700
Subtotal, FLORIDA..............	17,700
GEORGIA	
Cumberland Island NS................	1,000
Subtotal, GEORGIA...............	1,000
MASSACHUSETTS	
Cape Cod NS..............................	6,500
Subtotal, MASSACHUSETTS.........	6,500
MICHIGAN	
Sleeping Bear Dunes NL...............	8,400
Subtotal, MICHIGAN..............	8,400
MINNESOTA	
Voyageurs NP..........................	3,800
Subtotal, MINNESOTA.............	3,800
NEW JERSEY	
Pinelands NPres.......................	126
Subtotal, NEW JERSEY............	126
NORTH CAROLINA	
Cape Lookout NS.......................	2,000
Subtotal, NORTH CAROLINA........	2,000
TEXAS	
Big Thicket NPres....................	4,500
Subtotal, TEXAS................	4,500
MULTI-STATE PROJECTS	
(Unallotted by State)	
Administrative Expenses.............	4,250
Deficiencies and Relocation.........	2,200
Inholdings...........................	3,800
Subtotal, MULTI-STATE UNALLOC..	10,250
TOTAL, NPS................	59,776
Bureau of Land Management	
OREGON	161
Roque WSR.............................	161
Subtotal, OREGON....................	
MULTI-STATE PROJECTS	
Personnel and administration	
costs associated with the	
acquisition programs in Oregon,	307
Montana and California................	307
Subtotal, MULTI-STATE PROJECTS.....	
TOTAL, BLM	468
U.S. Fish and Wildlife Service	
FLORIDA	
American Crocodile................	948
Subtotal, FLORIDA	948
MICHIGAN	
Kirtland's Warbler	50
Subtotal, MICHIGAN	50
TOTAL, FWS.............	998

FY 1983 LAND ACQUISITION

Authorization Data

Management Unit	Authorized Acquisition Ceiling	Amount Available through FY 1982	Remaining Authorization	FY 1983 Request	Amount of Request Requiring Additional Authorization
National Park Service					
Deficiencies	N/A	27,988,173	N/A	2,200,000	N/A
Inholdings	N/A	123,781,052	N/A	3,800,000	N/A
Big Cypress NPres	136,700,000	147,075,000	9,625,000	14,000,000	-
Big Thicket NPres	63,812,000	75,917,000 1/	-0-	4,500,000	-
Cape Cod NS	33,500,000	34,067,575 1/	-0-	6,500,000	3,150,000
Cape Lookout NS	7,903,000	7,903,000	-0-	2,000,000	1,209,700
Cumberland Island NS	28,500,000	24,165,000	4,335,000	1,000,000	-
Gulf Islands NS	22,162,000	14,285,220	7,876,780	3,700,000	-
Lassen Volcanic NP	N/A 2/	-0-	-0-	5,500,000	-
Sleeping Bear Dunes NL	57,733,000	59,049,557 1/	-0-	8,400,000	2,624,700
Voyageurs NP	26,104,000	32,390,515 1/	-0-	3,800,000	1,198,600
Administrative Expenses	-	8,160,000	-0-	4,250,000	-
Subtotal				$59,650,000	
Pinelands NPres	3/	5,881,000	3/	126,000	
Total, NPS				$59,776,000	
Bureau of Land Management				161,000	N/A
Roque WSR	15,147,000	16,047,000	N/A	307,000	N/A
Multi-State Project Costs	—	—	—		
Total, BLM				468,000	
Fish and Wildlife Service					
American Crocodile	N/A	179,000	N/A	948,000	N/A
Kirtland's Warbler	N/A	---	N/A	50,000	N/A
Total, FWS..				998,000	

1/ Overceiling funds appropriated under P.L. 95-42 authority.
2/ Total investment included in the Inholding line item.
3/ There are ceilings of $23 million for land acquisition and $3 million for planning. Appropriations may be made from the general fund of the Treasury or from revenues under the Outer Continental Shelf Lands Act, as amended, which would otherwise be credited to miscellaneous receipts.

ALASKA LANDS ACT IMPLEMENTATION

The funding included in the FY 1982 highlights material reflected only the increases requested to implement the Alaska Land Act. The Bureau Budget Summary provided below includes all funding and personnel allocated to implement the Alaska Lands Act:

(Dollar Amounts in Thousands)

	1981		1982		1983	
	FTE/T	Amount	FTE/T	Amount	FTE/T	Amount
Bureau of Land Management................	40	3,000	40	4,324	40	5,382
Fish and Wildlife Service................	166	8,292	205	13,844	200	13,507
National Park Service....................	55	8,177	84	9,595	84	9,595
Geological Survey........................	170	10,405	204	13,143	76	13,761
Bureau of Indian Affairs.................	2	350	5	2,150	5	2,150
Office of the Solicitor..................	14	592	12	532	12	558
Office of the Secretary..................	---	---	(3)	960	(3)	1,000
Total..............................	447	30,816	550	44,548	417	45,953

Major components of the Department's implementation activities are:

Land Management. The BLM, FWS, and NPS have initiated management activities on all of the conservation system units (CSUs). The Bureaus have made critical resource management needs such as wildlife protection and fire management their a high priority and principle thrusts in FY 1982 and FY 1983. The operations' funding level for NPS, FWS and BLM includes base funding for CSUs affected by the Act.

Planning. The BLM is continuing land use planning activities for the Steese and White Mountains areas in FY 1982 and FY 1983. Given the priority placed on completion of the plans, they will be completed in December, 1984, a year before the statutory deadline. The FWS will complete comprehensive plans for five National Wildlife Refuges (including the four refuges in the Bristol Bay Study area) on schedule in December, 1983. The NPS is continuing its master planning efforts on a priority basis in the thirteen new or expanded areas. Two of the NPS' plans are scheduled for completion in December, 1983. NPS funding for its planning activities is being obligated from its General Park Management planning budget activity.

Land Conveyance. A high priority continues to be placed on Federal conveyance activities. In FY 1982, 6 million acres will be conveyed to native corporations and 13 million acres to the State. In FY 1983, an additional 4.5 million acres will be conveyed to native corporations and 13 million acres to the State. Also, $1 million is proposed in the FY 1983 Budget to process 2,500 native allotments to the point of survey.

The BLM is scheduled to review nearly 8 million acres in FY 1982 for withdrawal revocation to restore multiple use management and will review another 14 million acres for withdrawal revocation in FY 1983.

Special Studies. There are numerous studies underway which are mandated by the Alaska Lands Act. Those of particular interest are:

o The Bristol Bay Study, led by the FWS under the direction of the Federal-State Land Use Council, is scheduled for completion on time in December 1983.

o The Central Arctic Area Study, led by BLM, is scheduled for completion in December 1984—four years before the statutory deadline.

o The Arctic Coastal Plain Study is progressing. The Baseline Study has been completed, work is continuing on the required Environmental Impact Statement and regulations/guidelines for Seismic studies, and the scheduled completion is FY 1983.

o The Kantishna/Dunkle Hill Study, conducted by the NPS under the direction of the Federal-State Land Use Council, is scheduled for completion in December 1983.

Non-North Slope Leasing. The Non-North Slope mineral leasing program provides for a review by October 1985 of all BLM lands and non-wilderness wildlife refuge land for possible opening to leasing activities. Three areas have been designated as favorable petroleum geologic provinces and will be leased competitively.The first non-competitive leasing since the mid-1960's will commence in FY 1982 and continue in FY 1983.

ALASKA LANDS ACT

Comparison of FY 1981, 1982, 1983 Amounts by Function and Task

(Dollar Amounts in Thousands)

	1981 Amount	1982 Amount	1983 Amount
Land Management			
NCA/NRA Operations	17	566	622
National Park Operations	6,763	8,802	9,003
National Refuge Operations	2,999	3,443	3,934
USGS Operations	---	100	125
Subtotal	9,779	12,911	13,684
Planning			
Refuge Comprehensive Plans[1]	3,773	5,306	6,493
Park Master Plans[2]	(75)	(345)	---
Conservation Unit Mapping	900	900	900
Other Planning	256	834	1,022
Subtotal	4,929	7,038	8,415
Conveyance Activities			
Native Conveyance	2,571	1,300	2,300
State Conveyance	264	500	500
Withdrawal Review	---	68	48
Conveyance Mapping	955	1,800	1,800
Subtotal	3,790	3,668	4,648
Studies			
Alaska Mineral Resource Assessment	7,880	8,829	9,411
Wild and Scenic Rivers	15	26	26
Kantishna/Dunkle Hill	---	89	50
Arctic NWR	505	1,237	1,080
Bristol Bay Study	60	270	300
Other Studies	1,363	2,134	2,336
Subtotal	9,823	12,585	13,203
Alaska Subsistence Grant	---	960	1,000
Non-North Slope Leasing	90	2,242	2,305
Alaska Land Use Council	---	(300)	(300)
Equipment and Other Administrative Expenses	764	779	591
Other Requirements	1,641	2,445	2,107
Construction	---	---	---
Pribloff Island Acquisition	---	1,920	---
Grand Total	30,816	44,548	45,953

[1] The refuge comprehensive planning line item includes funding for refuge personnel which have operational functions in addition to refuge planning.

[2] Expenditures for Park Master Planning in Alaska will be obligated from the NPS General Management Plan Budget Activity. The allocation for FY 1983 will not be available until the FY 1983 appropriation is made.

The **Chairman**. Thank you very much, Mr. Secretary. I appreciate the detail with which you have presented a number of the proposals. I am sure that that will stimulate questions as people attempt to highlight by asking questions the policies that are underlying those proposals.

Senator Wallop.

Senator **Wallop**. Thank you, Mr. Chairman. Mr. Secretary, with regard to your Mineral Management Service, while it represents a budget increase where there had been no funding, is it your anticipation that it will more than pay for its existence by the increased royalties it will pay?

Secretary **Watt**. I am not sure that it will. We have inherited such a mess with regard to royalty management that I don't know exactly where we stand today.

As you know, because you held the early hearings on the Linowes Commission report—and I am grateful that you did—we simply don't know where we are on that program, and I want to reserve the options to come up with supplemental requests to hire the necessary manpower that we may identify as being needed.

I think Senator Bumpers properly counseled at your hearing that it could be even pennywise, pound foolish to try to skimp in that area. We are talking about a potential loss that could range from $200 to $650 million a year, and we need to pay whatever it takes to properly manage that activity. It is a good start, as you pointed out, but I am not sure that we won't be back.

Senator **Wallop**. Are you anticipating that these are startup costs?

Secretary **Watt**. We think it is much more than that. We think that it is likely that the request will carry the program, but we want to be careful not to commit to you that we are going to administer the program within that budget level. It may, but we may need more. In fiscal year 1982 we are seeking to double the number of inspectors. In 1980 there were 16,940 inspections. In 1981, under my leadership, we had 25,000 inspections. I don't know if we are going to need to double that force again. The Linowes report talks about needing 63 additional. I am not sure that is right if we properly manage it, so I need that flexibility there.

Senator **Wallop**. With regard to State cooperative programs such as the one that Wyoming has instituted. They have had some concern about the capability they were promised; it has been only part time. It also looks like it is moving back to Denver. They anticipate that that cooperative effort will be funded under your proposal or your supplemental request?

Secretary **Watt**. It certainly will, and I was advised that Jim Griffith made that comment after I was through testifying. I had not heard that prior to his testimony before your committee. We heard nothing but praise coming out of that. We will see that the necessary manpower is committed to the State of Wyoming as well as to the other four States that have asked us to get involved in those look-back audits to see if we can pick up the necessary money.

Senator **Wallop**. There was another question which our auditor, Mr. Griffith, raised. He wondered if it was a good idea to go on a company-by-company look-back audit rather than a property by property look-back audit in order to give them the basis from which to proceed in future years.

Secretary **Watt**. There is a dichotomy there. The State records are property-by-property, and I think it is about the only way that you can proceed with an orderly audit from the State perspective. The Linowes Commission report and our people have advised that the payout is very promising in a company-by-company audit as well. We are approaching it both ways. We now have underway a look-back audit with Exxon and Texaco, and I have ordered audits of 25 additional companies. That will give us coverage of companies paying 85 percent of the royalties to the Federal Government. Those will be contracted out for the most part.

Senator **Wallop**. Shifting gears a little bit, with regard to the Park Service budget, is it your anticipation that this will really begin the restoration of the existing parks or what level of achievement might we be able to expect by the end of the year?

Secretary **Watt**. The Park Service managers assure me that we are making substantial progress and that we have in fact addressed significantly the water supply problems. This need not be a concern of visitors as it has been in the past because we have brought dumping and sewage into the water of our park system under control. We are still putting money into sewage treatment facilities, but the problem is being solved. We think we are also making substantial progress in improving the fire safety and health safety of facilities, as well as other activities that will protect the resource base of the parks. I have received good reports on this and when I visited the parks last year, I was extremely encouraged by what I saw.

Senator **Wallop**. One of the things that we talked about in the Yellowstone trip was the difficulty that a park superintendent has in making his authorized personnel function to the best advantage of the park. Many of them felt the best use of personnel was not collecting gate fees because none of the fees were returned to the parks. They are short handed and have other maintenance priorities and operational priorities that simply have to be addressed.

Have you given any thought as to how that return of fees to the Treasury might somehow be reflected in the Park Service budget so that they wouldn't be viewed as losing moneys but instead be considered authorized fees to be collected and still maintain their park operation?

Secretary **Watt**. I think you are addressing a critical point, and I was made aware of it in a painful way when I visited Yosemite National Park last summer. I found that they did not have employees manning the entrance gates, and that they were running a very effective transportation system. It was costing us $1.5 million a year, and there was no recovery of these costs. I asked why the superintendent wasn't putting anybody on the gates, and was told that with cutbacks in personnel that we have experienced since the mid-seventies, a park superintendent could not justify putting a ranger or another park official on the gate when that revenue went to the general fund to pay for food stamps and other things instead of being put back into the park. He said we need to put all of the manpower we can into the park.

When I talked about the transportation facilities, I asked if anybody reimbursed the National Park Service for the transportation facilities given to the visitors. I was told no—that we were just out a cool $1.5 million. It doesn't seem like good business to me, so I asked why we didn't dedicate the revenues generated at the entrance gates, campground transportation, and other user fees we might have, to the park system and maybe even to a specific park.

I was advised that we could never get this proposal through OMB, and that we would have problems on the Hill. I said I could not believe that we wouldn't be allowed to dedicate revenues generated in a park or wildlife refuge for enhancing and improving that facility. I came back and immediately talked to our people at OMB. They quickly approved my proposal, and I am pleased to report that the President put it in his budget, as you are well aware, Senator. Within the next few days we will have legislation to this committee, I think in your subcommittee, and to the House asking for authority to earmark these funds generated by recreation activities for use in the recreation facilities.

Now we are asking for authority to set aside these revenues in a special fund for appropriation by Congress the following year. That leaves the control of those funds within Congress, as I think is appropriate, but it sets them aside for the National Park System.

I want to call to your attention that one of the key language provisions in the bill we are bringing to you points out that funds generated at the gates or for user fees are to augment and supplement the original appropriations, and are not to supplant or reduce these levels. In past administrations when user fees were set aside, Congress and OMB said that since we had these revenues, they would reduce maintenance and operations, thus defeating the very purpose of our park system. So once again, I am proud to be addressing a major policy change with regard to the park system, and I will urge that you give it quick consideration.

Senator WALLOP. We will certainly do that. Mr. Chairman, I expect others would like to ask questions.

The CHAIRMAN. Thank you very much.

Senator Bumpers.

Senator BUMPERS. Mr. Secretary, let me say first of all that I agree essentially with what you just said about the fee. I think we are talking about user fees, not entrance fees. Under the law, entrance fees may not be raised without congressional approval.

Secretary WATT. I am asking for authority to raise those, as well, so that those fees can also go into this account. My proposal is twofold.

Senator BUMPERS. When will the Park Service, which apparently is planning to raise user fees, have its proposal ready for examination?

Secretary WATT. The user fee proposal will go into effect for this new season. It will start this spring. The entrance fees cannot be increased, as you pointed out, without Congressional approval.

Senator BUMPERS. Have user fees been determined by the Park Service?

Secretary WATT. No. We are in the process of doing that. They will not be subsidized efforts, but will be competitive with the private sector to encourage people to stay outside the park as much as possible, and so that we will give everyone a fair chance on that.

Senator BUMPERS. I think that has merit. I have two concerns. No. 1, I would hope that the increases would not be precipitious. I would much rather, allow the Park Service, for example, to raise camping fees 50 cents or $1 this year and possibly 50 cents or $1 the following year rather than allow an increase from $1 to $4 or $2 to $4 in one fell swoop.

Second, I would hope the budget would not be cut in other places to offset a raise in revenues.

Secretary WATT. Absolutely.

Senator BUMPERS. If you want to set this in a separate fund, which I think we still do in Arkansas. I think that is a healthy thing as long as you don't use that as an excuse to cut the rest of the budget and force an inordinate amount of time and energy to be spent in collecting fees.

You said that you anticipate by 1983 $18 billion from the Outer Continental Shelf. Is that from bonus leasing and royalties?

Secretary WATT. Yes.

Senator BUMPERS. That is twice the level that you anticipate in 1982; is it not?

Secretary WATT. Roughly twice.

Senator BUMPERS. What are your assumptions on that?

Secretary WATT. We have several key assumptions on that. We will have nine sales. By circumstances, two of the sales in fiscal year 1982 will come in September, and we won't get the revenues until fiscal year 1983, so that is one of the reasons for the large difference between 1982 and 1983.

Another major assumption is that we will be successful by that time in negotiating a settlement with Louisiana, Texas, and California on the 8G OCS revenues. About $3.5 billion is set aside for that purpose. It is subject to some negotiation as to what should be shared with the States. We are going to negotiate for $2 billion.

Assistant Secretary Robin West has the responsibility for those negotiations, and he has been negotiating with the Governors of Louisiana and Texas and is optimistic. Robin also is the chief man responsible for coordinating OCS programs.

Robin, have I covered the major assumptions?

Mr. WEST. Yes. The only other factor is that there are some major sales coming up in the Gulf of Mexico and Alaska which are high resource sales, so we expect substantial revenues from them.

The other point is that because we are going to have an accelerated OCS program where more acreage is offered, we would expect the revenues from high potential sales to rise.

Senator BUMPERS. Mr. Secretary, I have been told that Interior is prepared to put the leases which we commonly know around here as the Pauley leases up for bid in June of this year. Is that correct?

Secretary WATT. That is correct.

Senator BUMPERS. I just thought I would make Senator Wallop happy today. I know he will be glad to know that.

Secretary WATT. We have discussed it with Senator Wallop.

Senator BUMPERS. The other thing I want to ask you about is the Land and Water Conservation Fund. Is that currently authorized at the $900 million level?

Secretary **Watt**. That is correct.

Senator **Bumpers**. Now does that fund not come from revenues from OCS?

Secretary **Watt**. That is the principal source of revenues. In addition, there are other sources, including the motor boat fuel tax, the sale of surplus properties, and recreation fees. We are asking for the new authority to put those fees into the special account.

Senator **Bumpers**. Now that is money that is dedicated and can only be used for the purposes set out in the law. One purpose is land acquisition, park acquistion.

Secretary **Watt**. That is correct.

Senator **Bumpers**. Do you expect there will be enough money in the Land and Water Conservation Fund to meet the authorization level in 1983?

Secretary **Watt**. The $900 million will go into that fund, and be earmarked for those purposes.

Senator **Bumpers**. One of the concerns I have is that in your budget you would only use four-tenths of 1 percent of that for land acquisition.

Secretary **Watt**. I have legislation pending before this committee which we continue to urge you to enact because it would allow the professional park managers to utilize those funds for more than just acquisition. We have found that there is a deplorable state in the parks because those funds that are, as you point out, set aside in this fund in rich amounts, have not been available for the professional resource managers to use as they think best. They may only use them for acquisition of more land they can't properly take care of. So we are asking for $60 million for the Park Service to be used in fiscal year 1983 for further acquisition, and that the rest of the funds not be used until our proposed amendment is passed by this committee.

Senator **Bumpers**. You have legislation pending before this committee now? We have not held hearings on it, have we?

Senator **Wallop**. Yes, we have.

Senator **Bumpers**. Last year?

Senator **Wallop**. S. 910.

Senator **Bumpers**. Now when it comes to the wilderness area, are you not now required by law to have a U.S. Geological mineral survey conducted before any lands in the wilderness are leased?

Secretary **Watt**. That is correct.

Senator **Bumpers**. In your budget highlights you state, "This cut is the result"——

The **Chairman**. Dale, would you yield just a moment? If I recall correctly, the prohibition of the law with respect to USGS lies in the wilderness designation, not in leasing. There are other requirements with respect to the environmental study.

Senator **Bumpers**. I'm sorry, Mr. Chairman. You are right. "No recommendation for wilderness shall be made until a mineral resource base study has been made."

Secretary **Watt**. OK. I see. I am anticipating EIS.

Senator **Bumpers**. I am reading from section 603(a) of the Federal Land Policy and Management Act. I stand corrected.

Secretary **Watt**. Excuse me. I thank you for correcting me, Mr. Chairman. Before you can lease lands in the wilderness, you must have an environmental impact statement prepared, and as of today, there has not been an environmental impact statement prepared on any wilderness, including Bob Marshall, and the Washakie, that is finalized. There is no authority for the Secretary of the Interior to lease any lands in the wilderness area at this time, and there has not been in the past.

Senator **Bumpers**. As an example, would you have any objection—I would have no strong objection in light of a suitable environmental impact statement—to drilling being permitted outside of a wilderness area where it simply meant drainage of land in a wilderness area? That is the situation down in the Ouachita's. There is some land down there that they are proposing to lease, and there would be no surface occupancy which I am very pleased to hear. If the EIS indicates that there is no impact on the wilderness, I certainly have no objection to including lands within the wilderness in a lease proposal. I was just curious whether the Department of the Interior intends to pursue that as a policy.

Secretary **Watt**. The policy you have expressed as it relates to Arkansas land is the policy we pursued in the New Mexico situation which drew so much erroneous fury. The situation in New Mexico was that the national forest there did their environmental assessment work and recommended that a lease be granted for production, for drilling under the wilderness area, but no occupancy granted. They allowed slant drilling for Forest Service land under the wilderness area, as you suggested as the wise course of action. That is what we have done. That has been criticized as an abuse of the wilderness system. As you wisely point out, that is not the case. There is no entry into the wilderness area in any lease that has been issued by the Department of the Interior since I came here, and I am sure that is true with my predecessor and has been the case in the past.

Senator **Bumpers**. Mr. Secretary, on that same subject, and one of my favorite subjects, of course, is the leasing of onshore——

Secretary **Watt**. We always get to that sooner or later.

Senator **Bumpers**. Now the Congress I think mandated that you raise the application fees from $10 to not less than $25.

Secretary **Watt**. That is correct.

Senator **Bumpers**. And you have now chosen to raise the fees to $75?

Secretary **Watt**. That is correct.

Senator **Bumpers**. The increase is now in place, is it not?

Secretary **Watt**. It will be in place on February 19, and will effect the March drawing. There will be no other drawings except for those who paid the $75 fee.

Senator **Bumpers**. Your assumptions in your budget are that you anticipate revenues from the lottery system and the noncompetitive leasing system to go from something like $30 or $40 million to $130 million the first year and to around $180 million the second year?

Secretary **Watt**. That is correct.

Senator **Bumpers**. Could you tell me what your assumptions are on those figures?

Secretary **Watt**. In 1981 we were drawing about 4 million applications for simultaneous drawing. We expect that by moving to the

$75 fee we will drop the filings to 1.5 million so we will drop 2.5 million applications which will cut down on the workload and increase our revenues. It is speculation that we will continue to draw much more than 1.5 million. If we do, it will result in more money. If it is less, it will mean less money. I would guess that it will be more than 1.5 million.

Senator BUMPERS. I assume you have not changed any of your thinking about this system of leasing?

Secretary WATT. That is correct. We believe we get the better dollar value.

Senator BUMPERS. Let me ask you a question that is not exactly hypothetical. In the State of Arkansas on December 3 last year we leased 80 acres in the [Quachita] National Forest. The Government owns the surface but the State owned the minerals and took competitive bids on that 80-acre tract. This land which had never been leased, and there is absolutely no gas production anywhere even remotely in the area—brought $103 an acre.

The Federal Government owns a lot of the minerals right around those 80 acres. If the Federal Government leases an 80-acre tract or any other tract adjacent to that 80 acres in the Washakie, it would lease for $1 an acre.

Secretary WATT. That is correct.

Senator BUMPERS. Do you think that is fair to the people of the United States?

Secretary WATT. The people of the United States would benefit if it is the traditional situation because many more people would file their $75 application fee in hopes of getting the opportunity to lease the $1 an acre, and the taxpayer would benefit immediately with that up-front money because of the multiple filings for that one tract of land. If it is a typical piece of land, the taxpayers win and we all win.

Senator BUMPERS. I have just one further question before I go to the floor, Mr. Chairman. Do you think that the purpose of the leasing policy should be to allow some lucky fellow's number to be pulled out of a hopper, to make somebody happy, or maybe rich, or do you think the purpose should be to promote oil and gas exploration and insure that the Government get a fair return for its resources?

Secretary WATT. We are moving to make energy available to consumers, and that is why this report that I want to be sure you have handed to you if it has not already been, shows that we have increased leasing 36 percent and acreage leased 153 percent this year over 1980. We need to increase our effects in this area so that we increase investment and drilling, to get energy to consumers. That is why we have put such a tremendous emphasis on this leasing program.

Senator BUMPERS. In the case in Arkansas that I just gave you, we are going to get the 80 acres drilled just as fast as the Federal Government on the adjoining 80 acres is going to get that 80 acres drilled for $1 an acre. The only difference is that Arkansas is going to get a $103 bonus per acre, and the United States will get $1 an acre for essentially the same land.

Senator WALLOP. That is not true.

Senator BUMPERS. It is true.

Senator WALLOP. If they get two people to bid, to file their $75 fee, they get you already.

Senator BUMPERS. You are talking about $75 per application, not $75 per acre, Senator.

Senator WALLOP. All right. You get $80,000. How many is that?

Senator BUMPERS. We are going to get $8,000. You would have to have about a hundred people bid on a lottery system to get the same amount, but that is not really the question. That is not my complaint.

My complaint is that the United States may or may not get more. It is just a pure happenstance. I just object to the United States leasing its land on a lottery basis. Mr. Secretary, I know your religious background. I know you don't believe in gambling. That's all this is, it is crap shooting.

Do you ever buy a lottery ticket in the Maryland lottery?

Secretary WATT. No; I don't do that either.

Senator BUMPERS. You don't believe in it, do you, Mr. Secretary? You don't believe in it on moral grounds. You don't believe in it because you don't think the best interest of the country is served, do you?

Secretary WATT. I have never had an extra dollar or whatever it takes.

Senator BUMPERS. Letting out Federal property belonging to all the people of the United States on the basis of a lottery is good. We have been through this so many times I won't badger you any further on this.

Secretary WATT. Promise?

Senator BUMPERS. Not right now.

The CHAIRMAN. Thank you, Senator Bumpers. Senator Murkowski?

Senator MURKOWSKI. I feel, Mr. Chairman, like maybe I should open here with a prayer.

Secretary WATT. Maybe we would all be better off.

Senator MURKOWSKI. Mr. Secretary, I am very gratified to see the commitment of our Department with regard to funding for conveyance to the State and native corporations, and appropriation of land. I wonder, for the record, if you or one of your associates could specifically clarify funding conveyances to the native corporations and conveyance on your mapping proposal in the native allotments? Do you have those figures?

Secretary WATT. You are asking for the specific figure for BLM?

Senator MURKOWSKI. Yes. There is some confusion in our efforts to get some accurate figures. I am not suggesting the figures that we have are not totally accurate.

Secretary WATT. Let me supply those for the record.

[Subsequent to the hearing the Department of the Interior supplied the following:]

ALASKA CONVEYANCE ACTIVITIES

[In thousands of dollars]

	Fiscal year—	
	1982	1983
BLM:		
Conveyances to State (tentative approval and patent)	[1] 2,700	[1] 2,700
Conveyances to native corporations [2]	[3] 5,400	[4] 5,400
Native allotments	[5] 500	[6] 2,100
USGS:		
Conveyance mapping	1,800	1,800

[1] 13 million acres.

[2] Costs for native conveyances remain the same, while acreage declines in fiscal year 1983 because the Bureau of Land Management will be focusing on more difficult cases.

[3] 6 million acres.

[4] 4.5 million acres.

[5] 120 allotments.

[6] 2,500 allotments.

Secretary WATT. We are making a commitment and will do so again right now to you that that has the highest priority in our good neighbor policy with the State of Alaska, and we will transfer those lands on schedule, and I have been assured repeatedly by the BLM people that adequate funding has been made available to increase that from the 7.5 million acres that we transferred to the State of Alaska last year to the 13 million that we are going to convey this year and succeeding years.

I still want to tell the Governor and you that if the wealthy State of Alaska would make more funds available to us, we would transfer more acres at a faster rate.

Senator MURKOWSKI. I got the message.

Secretary WATT. I haven't made much progress on that.

Senator MURKOWSKI. Which brings me to my next question. I note that in your budget projections you are assuming a substantial revenue from the offshore sale of leases. I believe you state approximately $18 billion in 1983 which indicates the great wealth that the Government controls in these offshore areas. I think in 1982 it was $7.9 billion.

In February, you are aware, there was a lease sale by BLM in the Naval Petroleum Reserve No. 4 of $52 billion. The total of those sales was $86 million, and I think it is probably fair to say that the response was a bit disappointing.

Secretary WATT. Yes; it was.

Senator MURKOWSKI. In view of the realization that in spite of the excuse that economic conditions were poor in that particular area, there is in infrastructure, and it is an established pipeline corridor, environmental impact studies have been done, a great deal of geological information is known. I know in your offshore oil and gas leases you have three areas in Alaska—Norton Basin, George Basin, and North Aleutian Shelf—all of which are much more remote, much more costly to develop, and I am wondering if the Department has considered the possibility that these lease sales might not generate the projected revenues, just based on a number of considerations: Whether they be the economic situation in the country, or the reality that the industry can only do so much in any given period of time. So I would appreciate your overview of this situation and whether or not it is conceivable that you should perhaps back off a little bit on your proposed lease sale schedule with the idea being that it might allow the industry to gear up and be able to handle the sales on a more productive basis from the standpoint of the Federal Government capability to generate maximum revenues by dumping it all on the market. Yet I know your projections probably are very dependent on the generation of this $18 billion.

Secretary WATT. Well, Senator, your concern is justifiably expressed, and we have focused hard on the subject. We were disappointed in the bidding. We have not determined yet why that happened.

One of the reasons I suspect that it happened is that the companies are holding out in order to bid on these other projects that are coming up with regard to the OCS. Looking back into the recent history of our successes in evaluating what we did or would produce in OCS bids in 1979 the budget came out with the proposal that we would generate $1.8 billion and the actual experience was $3.2 billion. In 1980, the budget came out with a proposal that $2.6 billion would be generated. The actual experience was $4.1 billion. In 1981, the Carter administration's budget included $6 billion. Carter then made an adjustment to that, and they raised it to $7.8 billion. With the Reagan arrival, we came to you folks last February and we estimated that the gross receipts for fiscal year 1981 would be $9.6 billion. The actual experience was $10.1 billion, so we have some ability in this area. We cannot make you an actual guarantee, but it is our best professional judgment, and we think the track record is pretty good.

Senator WALLOP. I think you pointed out earlier as well that this includes royalties, not just leases.

Secretary WATT. That's right, but Senator, the big ticket item is the bonus from OCS.

Senator MURKOWSKI. With regard to the Norton lease sale, do you have any information as to when that sale is scheduled?

Secretary WATT. Which sale?

Senator MURKOWSKI. Norton Basin as listed on page 5 of your offshore.

Secretary WATT. The tentative plan is for November 1982, but that is not yet final. Our 5-year program will be completed in May, and then it will come to Congress for 60 days, and it will be implemented in July, so it is still tentative until we make the May submission to the Congress.

Senator MURKOWSKI. The opportunity was afforded me the other day to meet with a number of local people in the Norton area from the Bristol Bay region that would be affected by this sale. They are concerned over how this will affect their lifestyle and job opportunities. I think the Governor expressed concern over the Bristol Bay area in his meeting with you. And I think you agreed to possibly delay that. But the individuals explained that it is necessary from their standpoint that they try to decide and meet with the industry now and set up the ground rules of how they will work together. They indicated there has been a lack of enthusiasm from the industry and have requested the delegation to consider some alternatives with express reference to your particular Department on perhaps an initial trade for their onshore selection. Not that it would do anything for your budget, but it would allow onshore development to occur prior to the offshore so that they would have an opportunity to be more or less integrated in to what could happen if there is in fact oil in the area. If that isn't possible, they have suggested that they would like a 5-year deferment so they could make sure that the industry has the capability to drill in this relatively new area of Norton, with its mud and ice conditions.

They are very concerned that their livelihood, which is dependent on fisheries resources, may be damaged because industry doesn't have the technical experience to drill in these particular areas. I am wondering what your attitude would be toward trying to insure those people that safeguards are provided in protecting these anadramous fisheries? Or perhaps an alternative such as a delay, based on prioritizing these lease sales, or some other type of insurance, even a trade?

Excuse me. The other areas are not quite as severe from the standpoint of the impact on the people who reside on subsistence.

Secretary **Watt**. You are highlighting a very important point. We need to be very sensitive to the subsistence requirement of the Natives in those areas. I did visit a community of Natives there and heard their views with regard to the Bristol Bay area to which you have alluded. Since Robin West here will be meeting with that group this afternoon, we will want to take into full consideration all of their concerns on the matter.

You raise an interesting point that in the State of Alaska by the Department of the Interior has not allowed an onshore oil industry to develop and, therefore, it is all new to the people. They don't know about the technologies of the industry. They have been denied jobs, and we hope to remedy that as you well know. We have opened up millions of acres of Alaskan interior land and hopefully will create jobs and opportunities for the people of Alaska as we meet the consumer needs of the Lower 48.

Let me assure you we will meet with those oeople and take their concerns into consideration.

Senator **Murkowski**. Would you take a look at the possibility of an onshore trade or potentially a delay?

Secretary **Watt**. We will look at that.

Senator **Murkowski**. I have two other questions. You have indicated, I think, in your budget, that you have approximately $9.4 million for minerals research. Does your budget include funding for implementing the President's policy on strategic minerals?

Secretary **Watt**. Yes. We have given special priority in the Bureau of Mines and in the USGS to accomplish the objective that will soon be announced by the President on that subject.

Senator **Murkowski**. My next question, Mr. Secretary, concerns the transfer of day schools in Alaska. I think there are 28 to 37 schools being transferred and your people are up there.

Do you have any plans or any provision to transfer those schools to State standards? The physical conditions of those schools has deteriorated dramatically.

Secretary **Watt**. Some of them are not in the best of shape. Others are in pretty good shape.

Senator MURKOWSKI. I will remember that—not in the best shape, and pretty good shape. OK.

Secretary WATT. I didn't say any of them were in great shape, did I?

Senator MURKOWSKI. No, you didn't.

Secretary WATT. They have indeed been ignored and neglected in past years, which is your principal point. Candidly we will try to transfer most of them in their present shape to reduce the burden on the American taxpayer to the greatest extent we can. You didn't like that answer at all.

Senator MURKOWSKI. No.

Secretary WATT. That's an honest one.

Senator MURKOWSKI. The State feels the transferred schools ought to be at least brought up to whatever the standard is—the Federal Government can do things that the State can't in this regard. The State has suggested you at least bring them up to the standard, and the State will then take over the whole burden of responsibility.

Secretary WATT. I appreciate your leadership in this. We can guarantee you they will be transferred in their current condition.

Senator MURKOWSKI. We are the only State that is getting all their schools transferred. We are accepting that burden and I would like to have a little paint on, maybe the front steps fixed.

Secretary WATT. We are helping you fulfill your constitutional obligation to provide a unified school.

Senator MURKOWSKI. I assume you would be somewhat receptive to the fact that there is a statutory obligation, I'm sure. You will at least give it some consideration?

Secretary WATT. I am sure I will hear this one again.

Senator MURKOWSKI. The last question is SPRO. I assume SPRO is not a part of this?

The CHAIRMAN. It is not. We are kind of pushed for time. Senator Melcher.

Senator MELCHER. Thank you, Mr. Chairman. Mr. Secretary, there is no assurance from any source that geothermal development in the Island Park area adjacent to Yellowstone will not damage the features of the geyser basin within the park.

What is necessary for us to do to make sure, and I am speaking about Congress, to make certain that there is no leasing for geothermal development in Island Park?

Secretary WATT. There will be no leases on geothermal activities that would cause any threat to Yellowstone National Park or any other national park.

Senator MELCHER. Mr. Secretary, that isn't my question. My question is what is necessary for Congress to do to make certain that there is no leasing?

Secretary WATT. That subject has been debated. We have the USGS study that indicates that they are ready, so I am told they are ready to come up here and testify that there is absolutely no relationship between Island Park geothermal activities and the national park activities.

Senator MELCHER. It is a perhaps no relationship that bothers us, and we listened, Senator Wallop and I listened, to the testimony of the Geological Survey both here and at Casper, and the facts are that they could not assure us that there is no relationship. They could not assure us that drilling might not cause some deterioration of the geyser basin within the park, and based on that, my question is very blunt, Mr. Secretary.

What is necessary for Congress to do to prevent any leasing, and what are you waiting for Congress to do to hold your hand in abeyance on leasing?

Secretary WATT. My hand doesn't need to be held in abeyance. It is not moving. We will not lease any geothermal facilities that are going to damage the park.

Senator MELCHER. You can't say that for a certainty.

Secretary WATT. I am saying it.

Senator MELCHER. That there is geothermal leasing that won't damage the park—no one can say that for a certainty. My question is very practical. If you need guidance, for instance, if we have a line item in the appropriation bill that says no funds will be spent by the Department of Interior, which would include the USGS, for purposes of leasing Island Park, would you consider that adequate?

Secretary WATT. I think you would have some opposition on that proposal.

Senator MELCHER. Would you consider it adequate to hold your hand completely in abeyance?

Secretary WATT. An absolute prohibition from making any geothermal lease would guarantee——

Senator MELCHER. Island Park.

Secretary WATT. Anywhere; you want to go global?

Senator MELCHER. I don't want to go global at this time. I want to protect Yellowstone's geyser basin with a certainty.

Secretary WATT. You do not want to protect Yellowstone any more than I do, so if we start with that assumption, then maybe we can work something out. There is no intention to do that.

Senator MELCHER. I know there is no intention. There has never been any intention by anybody to destroy the natural phenomena in any of these geyser basins, yet they have disappeared, and this is the premier geyser basin remaining in the world, not just in the United States, so I think at this point in time we would like to make sure that there is no leasing, and I judge from your answer without that sort of an absolute prohibition by Congress, by someone's order, that there will be leasing in the Island Park.

Secretary WATT. Senator, that is not what I said. It is not what I intended, and it is not what I will do. Now getting back to the basic question, I am offended that you would try to put those words in my mouth. To answer your narrow question, yes, if you put language in the appropriations bill prohibiting the leasing of anything, Island Park or anywhere else, there will not be leasing.

Now I am adding to that again for the third time, there will be no leasing anywhere that would cause any damage to Yellowstone or any other national park. There will not be mining. There will not be drilling. There will not be timber activities in the national parks as long as I am Secretary. I have said that repeatedly.

Senator MELCHER. We are on time limits here. I am not trying to be rude, but we are on time limits, and I am not talking about within the park. I am talking about adjacent to the park.

Secretary **Watt**. We will not allow drilling that will be detrimental to the park.

Senator **Melcher**. Well I think—I don't know whether it would be detrimental and you don't, and the GS doesn't, based on their testimony. They just said that guidelines could be established and that does not make sure that there is not any detrimental activity that will occur if leasing should occur.

My second point, as I discussed with you earlier, is the coal leasing in the Powder River Basin. What safeguards are there to prevent speculative bidding on getting those leases, for example?

Secretary **Watt**. The safeguards would be that the marketplace would require that there be competitive bidding after we have done the environmental impact work and we have set the targets with regional coal teams. I suppose that, using the points you raised earlier, there is no absolute guarantee that there will not be speculation.

Senator **Melcher**. It would seem that increasing I believe to close to 2 billion tons for this proposed lease sale, would indicate a great deal more coal activity in the Powder River Basin. I haven't seen that. I am interested in what prompts the team that put that package together to believe that there would be that much utilization of coal.

Secretary **Watt**. I am not prepared to present that. I don't have it with me. We can get you whatever information is available.

Senator **Melcher**. I would appreciate that very much.

[Subsequent to the hearing the Department of the Interior supplied the following:]

POWDER RIVER COAL LEASING

The Powder River leasing level was established at 1.4–1.5 billion tons of Federal coal reserves by the Assistant Secretary—Land and Water Resources in line with the goal of achieving a level of energy production to best meet national interests. The objective was to provide for enough Federal coal to meet the demand for reserves in the region, and to just to seek to lease at an amount approximating the potential development level. The Regional Coal Team (RCT) originally recommended a leasing level of 1.4–1.5 billion tons which accommodated the Department of Energy's production goal for the region with the assumption that all tracts leased would go into production. The RCT may have also been influenced by an assumption that all existing undeveloped leases and preference right lease applications in the region would lead to actual coal mining. Following a detailed review of the final environmental impact statement and all public comments received, the RCT elected to increase their preferred alternative of 1.4 to 1.5 billion tons upward to approximately 2.1 billion tons of Federal recoverable coal reserves. Other alternatives range from no additional new competitive Federal leasing to the leasing of 2.5 billion tons of recoverable reserves. The Department has decided to lease at a level of 2.24 billion tons of Federal coal to the offered in April 1982.

Senator **Melcher**. Now lastly, on Bonneville Power, the budget of Bonneville Power, do you do that perusal now? Do you give the budget of Bonneville Power perusal now?

Secretary **Watt**. I do not. I have not.

Senator **Melcher**. Even though it has been transferred by the executive?

The **Chairman**. John, if I might interject so the people would understand why the Secretary answered the way he did, that is under the Department of Energy responsibility since the Department was established, and not under the Department of the Interior. Is that not correct?

Senator MELCHER. That is correct, but one of the proposals of the President would assume that it would come under your purview, but you have not looked at it at this point.

Last, there has been discussion that water transferred out of the dam on the Missouri in South Dakota would be utilized for coal slurry.

Would that come under your purview?

Secretary WATT. We have responsibility for the right-of-way of the pipeline that would carry that water. The sale and delivery of the water would come under State water law and should not be affected by the Department of the Interior, or any Federal water law or regulation with regard to its sale.

Senator MELCHER. Is the Department doing anything about that at present?

Secretary WATT. We have approved the right-of-way across 6 miles of the BLM land as required.

Senator MELCHER. That is all the Department is involved in?

Secretary WATT. That is correct.

Senator MELCHER. Is there another function of the Federal Government concerned with that that is outside of the Department of the Interior?

Secretary WATT. There probably are some regulatory responsibilities about the pipeline that would be under the Department of Transportation, but I can't speak with certainty on that. That is speculation on my part.

Senator MELCHER. All right. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Melcher.

Senator East.

Senator EAST. I will pass to Senator Domenici.

The CHAIRMAN. Senator Domenici.

Senator DOMENICI. Mr. Chairman, within my time I understand that Senator East has one question he wants to ask, if it is all right with the Chair?

The CHAIRMAN. Certainly.

Senator EAST. Mr. Secretary, first I just want to personally congratulate you. I think you have shown fine leadership in taking over the Department of the Interior.

I just had one question I wanted to ask you. It has some relevance to my State potentially. On the Federal royalties to the States for offshore leasing, currently there is no sharing on anything beyond 3 miles—Am I correct on that?

Secretary WATT. Basically that is correct. There is one technical exception we call 8G, but generally that is correct.

Senator EAST. What would be your general attitude on changing that to make it a greater distance?

Secretary WATT. Our general attitude would be favorable; we will probably be submitting legislation on that within the next several weeks.

Senator EAST. Thank you.

Senator DOMENICI. Mr. Secretary, in the new budget proposal there is a whole new provision for management initiatives. Some of them will be your responsibility to both predict and manage. You have covered one of the large ones, the offshore drilling revenue expectation.

There is another that is different and unique, and that is the sale of public assets, public lands. We haven't talked about that here today, so I would like to ask you a few questions about it?

As I recollect, the budget proposes that you will pick up $1 billion in 1983, which would grow to $4 billion in 1984 and the outyears. This is a rather significant part of the President's 3-year management initiative revenue gainers.

Now all of that $1 billion for the first year will not come from the lands and assets that are within your jurisdiction. Is that correct?

Secretary WATT. That is correct, Senator.

Senator DOMENICI. Now Mr. Secretary, where is the detailed approach to how we are going to raise the $1 billion and then $4 billion? Has that been put into a definitive plan?

Secretary WATT. It has not, and it is yet to be presented to the Congress.

Senator DOMENICI. Well then, with reference to the lands over which you have jurisdiction, could you share with us how you intend to do that? I would call specific attention, and I think the hearing serves a good purpose here in two respects. There are two very serious conflicting interests that are going to occur that I think we must be aware of.

Out there in the public domain, especially in States that are water-based States such as ours, you have intermingled land so that you will have a property owner with a couple of sections of fee land, the State owns a couple of sections, and you own some land. Historically the lands that the National Government owns have been under lease. Obviously someone, therefore, considers that as an integral ranch. It appears to me we are going to have some real concern if we go into the middle of that and offer at market value some of that land that is intermingled without providing some preference without any loss to the Government to the people that have basically occupied it for generations in many of the States.

That wouldn't be as serious a problem in Senator McClure's State because the public domain is very isolated with respect to the property owners that use it. You move your cattle over there through the public domain in toto, Jim, excuse me.

Secretary WATT. That is a big problem in my home State of Wyoming.

Senator DOMENICI. Colorado—could you just share quickly with us what your thinking is on that?

Secretary WATT. I think you have underlined a serious problem that if the proposal were to be that we sell those kind of acreages, then some means would have to be provided to give first right of purchase to those rights that have been established through long periods of time.

I have personal knowledge of the problem you are talking about, and I am very sensitive to it. I think the first call with the President on the sale of surplus property, would be for those buildings and facilities that should be disposed of. We don't even have a good inventory or value of it.

We have in the Western States—New Mexico, Wyoming, Idaho, all of our Western States, and particularly Alaska, I would guess—land-locked communities that are totally islands within the public domain, and it is interesting that some of the people who want to keep it that way are the private land-owners who own the island because if they can reduce supply, they get the price up. I think we have an obligation to future home owners, to consumers, to open up more of those lands to the community, to the cities, so there can be expansion in these areas that are receiving so much population growth, as in your home State.

Senator **Domenici**. Mr. Secretary, with reference to either of the two situations you have just described, both of which I agree with you are problems, you don't have authority to convey that kind of land now other than in very special cases, is that not correct?

Secretary **Watt**. That is correct, but we do have authority for isolated special cases.

Senator **Domenici**. Incidentally, I want you to know that our distinguished chairman indicated that New Mexico is not a water-based State. Maybe he has never been to New Mexico.

The **Chairman**. I have flown over it, Senator.

Senator **Domenici**. You were too high to see. Mr. Secretary, the other problem I see is that you presently have a preference for local institutions to provide recreation use and the like. You are going to have another conflict if you get into a bidding war between institutions of government that have had an opportunity under existing law to purchase for those special uses.

I assume you will take care in preparing your proposals to cover that fund also, is that correct?

Secretary **Watt**. I think there must be a public purpose call for recreation, for public firehouses, hospitals and the like. That must have some priority given to it as it now has.

Senator **Domenici**. Is it fair to say from your general discussion here that the first installment of this $1 billion or the 1 billion for 1983, that little of it will come from the public domain of the type you manage and probably more will come from buildings and excess property of a different type?

Secretary **Watt**. That is my understanding from discussions that I have had at Cabinet meetings, and the President's document says that the assumption in 1983 is that they will all come from GSA managed properties.

Senator **Domenici**. You have ample opportunity to present this committee and other committees of jurisdiction with any program or plan with reference to the public domain as we understand it.

Secretary **Watt**. Absolutely, and we will want to be sure that we protect any sales that involve fishing and hunting rights. They will be open to the public and the like.

Senator **Domenici**. Mr. Secretary, the budget also reflects that the Bureau of Reclamation will have $48 million for new starts. It goes on with some kind of a caveat if certain cost-sharing arrangements can be made.

Do I understand, therefore, that this $48 million for new starts in the opinion of the administration is conditioned upon a new cost-sharing law being passed by the Congress, and if so, what are the general features it contemplates?

Secretary **Watt**. We will insist upon cost-sharing features. We do not feel that that would require new legislation, but it can be worked out, and we have extensive negotiations going on now with several States that are eager to participate in such cost-sharing programs. I think Senator Wallop will be holding hearings this week on the proposed project in Wyoming, and Buffalo Bill Dam where they want to pay 50 percent of the cost. Candidly, it wouldn't have the ratio—one or a little bit more—to justify building it if it weren't going to be marginal. But under 50 percent cost-sharing, all of a sudden it becomes a very attractive proposal.

We are working in Colorado and in other States, but let me assure you again that, whether you like it or not, you will be hearing a lot about that from your constituents as well as from us.

Senator **Domenici**. You don't have any argument with me. I tried to do that in the Corps of Engineers for 4 or 5 years with more State direction as to what they want to build in exchange for significant cost sharing.

Secretary **Watt**. That is the attractive part of this proposal. It allows one or more new starts in the West, and it makes the States compete, and I have met with Governors and legislative leaders, and told them to get their own house in order, that they couldn't serve up six or eight projects and say we want one of these. If we know which one they want enough to put their own tax dollars into, we will have better projects that better serve the consumer.

Senator **Domenici**. Mr. Chairman, I am not familiar with the jurisdictional issue. Are we talking about any of the Indian facilities that he has jurisdiction over or is that not part of this?

The **Chairman**. Yes.

Senator **Domenici**. Is the SIPI regional vocational institute part of this presentation?

Secretary **Watt**. Yes, it is. We are prepared to address the SIPI proposal as part of the budget submitted to you, Senator, and we are asking that that project be phased out as a technical institute. Now because of your interest and the interest of your delegation it has been suggested that perhaps we could obtain private money to assist in that project.

Presently we are paying that facility, I think, $6,800 per student. For some of the facilities, we are paying $11,253 per student for other postsecondary schools. These are Indian institutions and we are trying to address those in New Mexico, Utah, and Alaska. If we could see that the private sector or State or local governments could come in and help pay the cost of that project, we might want to take a new look, but we cannot justify the present state of expense if the figure is $6,800 per student, and it is not less than that I can assure you. We have excess capacity in several of our schools and can transfer those around for better economies if necessary.

The SIPI buildings are good buildings and good facilities, and when we phase that out, we will be bringing new Indian, new government, activities there. There would be jobs. There would be utilization of that space for a more effective purpose.

Senator **Domenici**. The chairman has informed me that my tim is up. I will say, Mr. Secretary, in conclusion, that when you loo at that particular regional vocational institution and see the tre mendous changes that have occurred in the past 36 months i terms of the cost, of placement, and the spread of population versus the Indian vocational needs, I disagree at this point. I think when you made this decision 24 months ago you used a study saying it probably wasn't working. But the audit of it as late as last October indicates it is making some rather significant strides, and I am concerned when we ask the Indian people to get back into the private sector mainstream that we ought to not precipitously take away the opportunity to be trained. I thank you for your concern.

Secretary **WATT**. I would respond, Mr. Chairman, that Senator Domenici makes a very powerful point. We are doing everything that we can to bring jobs to Indian country.

We have set up the BIA budget at $88 million greater this year than in 1982. We have a special request for about $10 million to attract industry to the reservations, and we need to see to it that we are preparing the Indian community to participate in what I talk about as economic emancipation. Part of that is training, and if we could get the corporations that will benefit from the technical training that we are giving those Indians to subsidize part of the cost, I think it would be very good. But right now it is a direct subsidy to them, and we are trying to eliminate that. If we could get Motorola and some of those other companies that benefit from the training to assist in the training, we would all be better off, and I would like to work that out.

The **CHAIRMAN**. Thank you, Senator Domenici.

Senator Bradley.

Senator **BRADLEY**. Thank you, Mr. Chairman. Mr. Secretary, I would just like to confirm these statements if you could. Is there still a moratorium on funds for acquisition of land for parks?

Secretary **WATT**. The Land and Water Conservation Fund State grant program received no moneys in the 1982 budget. That was approved by Congress. There is still $26 million unobligated in that fund, and more than $540 million that is obligated and unexpended by the States. These moneys are just waiting to be put into an investment and recreation opportunity for the American people. That hasn't occurred. Last year out of some $600 million, they only drew down less than $100 million. This is disturbing to me; I am disappointed.

Senator **BRADLEY**. Have you recommended the elimination of Federal funding for urban parks?

Secretary **WATT**. Again, as we did last year, we are recommending that no funds be provided for that program. Congress appropriated $7.7 million for the urban parks program in 1982. Over the history of this program, we have appropriated $139 million for local government activities; $50 million of that amount continues to be obligated but unexpended by local governments. They don't have the matching capability to use the funds, so we are asking for zero funding there as well in 1983.

Senator **BRADLEY**. Zero funding; if local governments wanted to offer funds to be matched by the Federal Government for urban parks the Federal Government wouldn't have the funds for matching.

Secretary **WATT**. There is $50 million that has not been matched, although it has been obligated.

Senator **Bradley**. OK, could you explain your idea that we increase user fees for campgrounds and other areas?

Secretary **Watt**. The basic concept of our philosophy is the beneficiary ought to pay, and that if campgrounds are provided, they ought to pay for the value of those campgrounds being provided to them at the taxpayers' expense. We shouldn't subsidize campers.

Senator **Bradley**. How much revenue would you contemplate raising in this manner?

Secretary **Watt**. On campgrounds alone? I don't know.

Senator **Bradley**. On the total fee system.

Secretary **Watt**. We would like to bring in $40 to $50 million in entrance fees and user fees.

Senator **Bradley**. The entrance fee is involved here too?

Secretary **Watt**. Entrance fees are regulated by statute now. We don't have the authority to raise those in our own right. We are asking——

Senator **Bradley**. Asking for authority to raise the entrance fees?

Secretary **Watt**. That is correct.

Senator **Bradley**. What is the rationale for that?

Secretary **Watt**. Presently the Park Service charges from zero to $3 to enter the park system. In some areas it is not practical to collect. It is not worth it.

Senator **Bradley**. How many parks have entrance fees?

Secretary **Watt**. I don't know that number off the top of my head. We can get that for you.

[The information follows:]

ENTRANCE FEES

Sixty-three parks have entrance fees.

Senator **Bradley**. Maximum is $3?

Secretary **Watt**. That is correct.

Senator **Bradley**. What would you anticipate the fee structure is going to be in order to get access to national parks?

Secretary **Watt**. I think that in parks like Senator Wallop's Yellowstone you could double it easily.

Senator **Bradley**. Six dollars?

Secretary **Watt**. At least; we haven't done a study on that and don't have an exact recommendation.

Senator **Bradley**. And what is the rationale for that?

Secretary **Watt**. If we are going to invest hundreds of millions of dollars in providing this unique experience for those who are privileged to see it, they ought to contribute to some of the expense of maintaining it.

Senator **Wallop**. If I could——

Senator **Bradley**. I only have 10 minutes.

Senator **Wallop**. That is per car, not per person.

Senator **Bradley**. Six dollars per car?

Secretary **Watt**. And we feel that if someone is driving to Yellowstone with their family, they can afford to pay more than $3 for *x* days.

Senator **Bradley**. Would you envision parks generating more revenues getting more benefits?

Secretary **Watt**. Yes.

Senator **Bradley**. You would?

Secretary **Watt**. We do. In this legislative package we are submitting to you, we will propose that a special account be created for all revenues so that Congress has the control of them for subsequent appropriations in the next years, not to reduce the basic core program, not to supplant it, but to supplement it. We would then require, and I have to talk on a formula-type basis, that if x dollars has been raised during the last year, we would give an increment of 20 percent of those dollars to the park that generated those funds so that the superintendent there could see that they were receiving special benefits. The other moneys would subsidize other parks that need attention, but that don't have as high a rate of visits.

Senator **Bradley**. So that you would envision superintendents who had a high level of traffic getting more themselves?

Secretary **Watt**. For the park.

Senator **Bradley**. For the park, but there would be no bonus for the superintendent himself?

Secretary **Watt**. We don't allow that in Federal Government. It might not be a bad idea, but it is not allowed and we are not proposing it.

Senator **Bradley**. What are SES bonuses?

Secretary **Watt**. Those are bonus systems for extraordinary service and contributions by senior executives.

Senator **Bradley**. Including superintendents of parks?

Secretary **Watt**. I am advised that no park superintendent is in the SES.

Senator **Bradley**. Well, let me read from a memo to you. It says, "Regarding the entrance fees and"——

Secretary **Watt**. This is a memorandum from whom to whom?

Senator **Bradley**. A memorandum from Mr. J. Robinson West to you in which he says, "Secondly, to provide incentives to superintendents, PBA recommends that ability to generate revenue be a critical element in determining merit pay increases and SES bonuses."

Now doesn't that contradict what you just told me, that is, that the superintendent himself won't benefit if he is able to generate a high level of traffic?

Mr. **West**. Senator, we feel it is important for the Park Service that the appropriate revenues are generated. The merit pay system is different from the SES system. It is important to recognize that. They are two different systems by law.

However, what we are hoping to do is to see that the parks are properly managed, and part of that is to see, for example, that the appropriate revenues are collected. In the past, the incentives of park managers has not been in that direction. We want to encourage them to generate revenue. We don't think that is inappropriate at all.

Secretary **Watt**. I explained earlier, Senator, that in my visit to Yosemite and other parks I have found superintendents who have not put anybody on the entrance gate because of decreasing funds since the 1970's.

Senator **Bradley**. Let's say your superintendent gets assigned to Olympic National Park which has a little less traffic than Yellowstone National Park.

Won't the person who is assigned to Yellowstone automatically be in line for a rather sizeable SES bonus and merit pay increase because he has a higher level of fees generated simply because of where the park is located?

Mr. **West**. Not necessarily.

Senator **Bradley**. Why not?

Mr. **West**. A proportional rise in one park as compared with another, that is one factor. The second factor is there are many different standards built into the overall merit or SES systems. You can't neglect everything else solely for the purpose of raising funds.

Senator **Bradley**. You are saying "critical element in determining merit pay increases," so the guy that gets assigned to Yellowstone gets a potential personal benefit unavailable if he is assigned to Olympic.

Secretary **Watt**. I would hope we have the management skills to see the distinction you are making.

Senator **Bradley**. You would be aware of that?

Secretary **Watt**. Absolutely.

Senator **Bradley**. My concern is that assignment of superintendents in the national park system be held neutral from a personal financial standpoint. Is that your intention?

Secretary **Watt**. It is our intention to continue running the career management of the Park Service as we have been doing, and they go on merit. Yellowstone is the flagship of the whole system, and our No. 1 superintendent is there. Everyone wants to be superintendent of Yellowstone because it is a coveted position. The superintendent at Yellowstone obviously gets paid more than the superintendent in Katmai National Park in Alaska.

Senator **Bradley**. Let's say you are going to bicycle from a neighboring community in New Jersey to Gateway National Park. Would you pay fees to get in on your bicycle?

Secretary **Watt**. That depends on whether there is a collection system set up for that.

Senator **Bradley**. Is that your intention, to have entrance fees at every park?

Secretary **Watt**. Every park does not have entrance fees.

Senator **Bradley**. How do you determine that?

Secretary **Watt**. In Yellowstone where you have four main entrances it is easy to control. Although I am not that familiar with the situation at Gateway, it seems to me that if there are many entrances, it might not be economically feasible to have fees.

Senator **Bradley**. Gateway is the closest thing we have to an urban national park. There are a lot of people that have access to that who wouldn't have the money to drive all the way to Yellowstone.

Secretary **Watt**. It wouldn't make much sense to do it.

Senator **Bradley**. My point is do you intend to provide the same kind of fee structure and approach to entrance fees and user fees in an urban national park as you would in a national park where it would be easier to have to drive 2,000 miles?

Secretary **Watt**. I think there is a clear difference, and we must have management skills flexible enough to adhere to those differences.

Senator **Bradley**. Your anticipation is that there would be no entrance fee to Gateway National Park?

Secretary **Watt**. To Gateway National Park, aren't there multiple entrances that you come in any street you want to?

Senator **Bradley**. You can't come in any street. There are limited entrances.

Secretary **Watt**. Then I would need to defer to the professional park planner and manager to see what his recommendation would be, and since I have not heard that, I should wait for his input on that decision.

My inclination would be to answer the question the way you want me to answer it, but all decisions that I have made dealing with the National Park Service have been supported by the professional managers, and I should reserve that one for their input as well.

Senator **Bradley**. But do you have any problem with the rationale?

Secretary **Watt**. I do not, and many areas will continue to be available without fee.

Senator **Bradley**. One last question—in the authorization for land and water conservation, you are asking for $69 million?

Secretary **Watt**. That is correct.

Senator **Bradley**. And in your breakdown of the $69 million you have allocated $126,000 to Pinelands. Could you tell me why you decided to be so generous?

Secretary **Watt**. We looked at the ability to use the money, and they received about $5.8 million this year.

Senator **Bradley**. A little less.

Secretary **Watt**. And that needs to be wisely spent before we spend more.

Senator **Bradley**. So the Federal commitment to helping acquire land certainly is not going to be part of this, right?

Secretary **Watt**. Excuse me?

Senator **Bradley**. The Federal commitment to help acquire core territory within the Pinelands is not—you can't buy much land with $126,000.

Secretary **Watt**. That is to run the commission activities and administer the spending of the $5.8 million.

Senator **Bradley**. Thank you.

The **Chairman**. Thank you, Senator Bradley.

Senator Metzenbaum.

Senator **Metzenbaum**. Senator Bradley has inquired of you concerning the fact that there is no money for urban parks, a program I am proud to have authored.

Congress had authorized $125 million for fiscal year 1983 in the 1979 bill. Now you are cutting that down to zero, and I would guess that you would say that we are cutting back spending to help reduce the deficit? Is that a reasonable assumption?

Secretary **Watt**. That is a reasonable assumption.

Senator **Metzenbaum**. And the administration has proposed to totally eliminate funding for historic preservation. That program took a 70-percent cut over the last 3 years. Now you propose an additional 25.4-percent cut, and I assume that that cut and the money for historic preservation is also on a budgetary basis?

Secretary **Watt**. I am not sure of the figures. I am not following you on those figures.

Senator **Metzenbaum**. I am informed that——

Secretary **Watt**. I can talk about our approach to that.

Senator **Metzenbaum**. Go ahead, because we don't have to quibble about whether it is 70 or 25.

Secretary **Watt**. They are what they are. The historic preservation program is a very successful program, and that is why the Reagan administration recommended to the Congress and Congress approved a 25-percent tax credit for restoration of historic sites. As a result, we have seen a flurry of activity in the preservation community because businessmen are looking for away to take advantage of the tax credit.

It is estimated that $200 million this year will be claimed as tax credits for restoring historic sites. That is an unprecedented rate of restoration of these historical sites. We think it is going to occur so much that we have asked for an additional $650,000 for the National Park Service to process those certifications for tax credit treatment.

We do not feel that we need to subsidize this segment of the economy anymore. We do not need to make grants. We do not need to make matching grants or grants to the national trust. This program is booming at a rate that is unbelievable. We support it. That is why we put the 25-percent credit recommendation to the Congress.

Senator **Metzenbaum**. Now the tax credits you are talking about, are those for historic preservation or for buildings that are over 40 years old?

Secretary **Watt**. Those are for the rehabilitation and restoration of historic sites.

Senator **Metzenbaum**. You are not now talking about that part of the tax bill that has to do with buildings that are over 40 years old?

Secretary **Watt**. It is historic buildings.

Senator **Metzenbaum**. Do they have to be so designated as historic buildings?

Secretary **Watt**. Yes, in order get the full credit.

Senator **Metzenbaum**. Or do they just have to be over 40 years old and they can get a credit under the tax law?

Secretary **Watt**. I think that is an addition.

Senator **Metzenbaum**. You are not including the two together?

Secretary **Watt**. I have been focusing my attention on those facilities that qualify under this historic preservation program that you are asking about.

Senator **Metzenbaum**. My real question is you did do something very drastic about restoring old buildings that were over 40 years old, I think up to 30, and then over 30, and then over 40. I want to be certain that the figures you are talking about aren't including all of that because many of those buildings aren't historic at all. They are just rundown, dilapidated buildings, and they are redoing them, and I am not criticizing that, but that is not the same as historic.

Secretary WATT. I need to thank you for being precise. I am not prepared to give you the correct answer. Let me supply that for the record. The 25-percent is for those buildings that have been designated, certified as historic.

The CHAIRMAN. If you will provide that for the record, it will be made a part of the record.

[Subsequent to the hearing the Department of the Interior supplied the following:]

TAX INCENTIVES

The 1981 Economic Recovery Tax Act establishes a three-tier investment tax credit (ITC) for qualified rehabilitations of older buildings. For substantially rehabilitated buildings 30 years or older a 15 percent ITC is available; for those 40 years or older a 20 percent ITC can be used; and for certified historic structures (either on the National Register, in a National Register historic district or in a certified state or local historic district) a 25 percent ITC is allowed.

It is estimated that in fiscal year 1982 more than $800 million in private monies will be spent on historic properties which qualify for the 25 percent investment tax credit, with approximately $133 million claimed as tax credits for rehabilitating historic buildings.

For fiscal 1983, the 25 percent ITC is expected to generate $200-$250 million in tax credits.

Senator METZENBAUM. I would like to see it. Forward it to me directly as well.

Now the thing that bothers me, Mr. Watt, is that this budget has an increase in it of $179 million, from $771 to $950 million for 70 existing water projects, and to start up 6 new projects. Most of these projects are in the West.

Secretary WATT. You are talking about water projects.

Senator METZENBAUM. Water projects, and my question to you is why does this administration see fit to discriminate against the older cities of America where the urban parks program is working? The money in that program was a pittance.

Secretary WATT. You are comparing water projects to parks?

Senator METZENBAUM. I am comparing money. That is what we talk about—money. We've got to get rid of the deficit. What I am saying to you is you take it away from the people who live in a rundown community. They need a little park in the community. We were only talking about $7 million last year.

Secretary WATT. That won't buy many parks, will it?

Senator METZENBAUM. No, it won't, but the fact is there is a $179-million increase for the water projects, and the people in the Northeast and Midwest literally feel that this administration is discriminating against them, and I think these figures would confirm that.

Secretary WATT. May I respond to that?

Senator METZENBAUM. Please do but not for too long.

Secretary WATT. The money for water projects in the West is because, the Secretary of the Interior only has authority to function in the 17 Western States with regard to water projects.

The Nation is going to need billions and billions of dollars invested in water resource projects across the Nation. In 1990, I predict, Senator, the greatest crisis facing America will be water shortages.

We need billions of dollars to rebuild the cities you are talking about—not the whole city. I am talking about the water supply only, with the rusting and rotting out in the New England and industrial States that you are referring to. We need to build those facilities. We need them in the South for more flood control and more storage and delivery capability. We need them in the West, but we don't have the economic strength today because 13 cents out of every dollar brought into the Government goes to service a trillion dollar debt. We need that money, but we don't have the economic strength for me to recommend to you all that should be put into water in your State, in the East.

Senator **Metzenbaum**. I am not asking that. I am asking you why don't you just keep the funding for the urban parks program, keep the program operable? What you are doing is you are saying in order to balance the budget we are taking a few measley dollars away from this city where some kids might be able to go out and play instead of tearing down the community. What happens this summer, and I think it may happen under this administration's program, if they start to burn down the cities of America once again? Then maybe some people like you will say maybe we should have some recreation programs.

Secretary **Watt**. That was predicted last summer as well.

Senator **Metzenbaum**. Therefore, we don't give a damn? Don't worry about it?

Secretary **Watt**. May I respond to the urban park issue? Seven point seven million dollars wouldn't even be noticed if you were willing to total up what local communities, county and State governments invest in providing recreation opportunities. The Federal Government doesn't even influence the total commitment. It is so large and so effective and so good that we don't even influence those dollars.

Senator **Metzenbaum**. It was $125 million. That is what it should have been. You people cut it back.

Secretary **Watt**. I tried to give the figures to you, but maybe you weren't in the room; Congress appropriated $139 million over the several years of the life of this program; $50 million sits in the U.S. Treasury waiting to be matched by those cities so that they can utilize the funds. It is there. Congress has given it, and yet the cities don't want it enough to match it in order to get it. It is obligated, and until they can show their capability and their desire and make a high enough priority, why should we keep putting more in the bank account if is not being used? I don't think it is good economics, and we have $50 million in that account. We have more than $540 million in the Land and Water Conservation Fund account that has not been matched by those same communities.

Senator **Metzenbaum**. What do you use for matching as far as water projects are concerned? What is the ratio?

Secretary **Watt**. We are holding up the program until that is worked out.

Senator **Metzenbaum**. Presently, there is no matching, is there?

Secretary **Watt**. It depends on the purpose. For flood control there generally is not. For irrigation, municipal and industrial, they pay for it.

Senator **Metzenbaum**. They what?

Secretary WATT. They pay for it.

Senator METZENBAUM. But the fact is that in the main the water projects in the West are not based upon matching funds?

Secretary WATT. They are paid for. In the main, the water projects in the West are paid for by the users of the water.

Senator METZENBAUM. But that is a long way down the road, and the fact is the Federal Government doesn't get that money back, does it?

Secretary WATT. The Federal Government gets that money back.

Senator METZENBAUM. What is the interest rate?

Secretary WATT. It varies. Power pays a high interest rate.

Senator METZENBAUM. What is the range? Do they pay comparable rates to what the Government is paying for money today?

Secretary WATT. Not now they don't. If they are authorized, like any business loan that you would get, it is locked into a specific timeframe.

Senator METZENBAUM. What about new ones that you are putting up?

Secretary WATT. We have legislation that we are working with this committee on, but it is locked up in the House. This administration is recommending there be an interest component put into the irrigation payment to provide for its fair share. That is the Reagan administration proposal. We are hopeful you will vote for that.

Senator METZENBAUM. My time is running out. I would like to ask you one more question.

Senator BUMPERS. I'll vote for it.

Secretary WATT. We're doing great, Senator Bumpers.

Senator METZENBAUM. Under the Federal Land Policy and Management Act, for onshore leasing, before the 1976 amendments, 37½ percent went to State governments. Now 50 percent goes to the State government other than to Alaska, and 90 percent to Alaska.

Now at that time nobody anticipated the size of these amounts that would be going to the States. Nobody realized that the Alaska share in 1980 would be $2.5 million, and that it would go up into the hundreds of millions as this program moves forward. Nobody recognized that the State share would go from $315 million up to $1.4 billion within the next 10 years, and as you well know, your own State of Wyoming receives 70 percent of the Federal royalties received by all the States. In fact, it is $288 per resident in Wyoming.

Secretary WATT. A third.

Senator METZENBAUM. Pardon?

Secretary WATT. Excuse me—70 percent, a third of the U.S. royalties go to the State of Wyoming.

Senator METZENBAUM. Now Wyoming and New Mexico get 70 percent together.

Secretary WATT. OK. Start adding; you'll get it.

Senator METZENBAUM. I stand corrected, but that's good enough. The point is still there.

My question to you is in view of the need for more funds, Federal funds, is the administration prepared to recommend some modification with respect to the Federal mineral payments to the States?

Certainly Alaska doesn't need the money; it's awash in cash. And since the dimensions of the problem are going to be so great, isn't it fair that when you are looking for dollars that you look also at the percentage distribution to the State?

Secretary WATT. I have two points, Senator: First of all, this administration will not be recommending legislation that would change that formula.

Second, with regard to the water projects, we started building water reclamation projects in the Western States in 1902. There has been more money spent building the Metro system here in Washington, D.C. than has been spent on all reclamation projects in the Western States since 1902.

Senator METZENBAUM. Does that make it right?

Secretary WATT. It shows you where the priorities have been, and from those lands in those Western States, we bring water from Federal projects to irrigate 1 percent of the agricultural land in America. That 1 percent of the land produces 10 percent of the agricultural produce consumed in America. You get your lettuce, you get your tomatoes, you get those things in Ohio from Federal reclamation projects. I think it is a marvelous investment in the future of America. I wish we had more. I wish we had invested more in the past, and I hope we invest a lot in the future. It is a tremendous investment if you believe in the future of America.

Senator METZENBAUM. Why are you eliminating water research projects from the Office of Water Research and Development if that's the way you feel?

Secretary WATT. Because it is time to start doing and quit researching. We have the capability. All we lack is economic strength to do what is needed for America, and we hope to bring that about with the Reagan economic program. We don't need to study anymore. We need to do it, and it is clear. We need to rebuild the water facilities in your State and in all the States of the Nation so we can meet consumers' needs, and I hope we will have the economic strength to do it.

Senator METZENBAUM. Mr. Secretary, my time has expired, but I must confess as I hear your testimony I am not sure whether I am hearing an advocate for the Western States or whether I am hearing the Secretary of the Interior of the United States.

Secretary WATT. I can answer that. You are hearing both.

The CHAIRMAN. Thank you, Senator. Mr. Secretary, there are a number of questions that have occurred to me as we have gone down through the testimony and the questioning of the various members. There are a lot of questions that we will not have time to go into today.

With respect to the National Water Institute and also the Minerals Institute, there is some national good that flows from those institutions; is there not? It is not simply a matter of support for the personnel at those institutes?

Secretary WATT. There has been some good that has come out of both types of institutes. We feel that concerning the Mineral Institutes, much of the work that has been done there really is an incorrect subsidy to the industry. We don't believe that should be going on and we recommended zero funding there.

The **Chairman**. One of the concerns I have. Look at education in this country. I recognize that education is not your primary responsibility, nor is it the primary responsibility of the Federal Government in my view. But, if you look at the number of scientific and technological graduates of the various institutions of higher education in the United States and compare them with the countries with whom we compete—Japan, Great Britain, Soviet Union—these countries are all turning out a much higher number and much higher proportion of graduates in a number of these areas. The reason these institutes were started in the first place is because, as you very appropriately recognize, there is a strategic minerals crisis and yet we are turning out far too few graduates that will go into those industries.

Now yes, after we move up in that area—after we start more mineral activities in this area—then there will be more of a demand for the people, there will be more of a demand for that education, and there will be more students fed into the system and ultimately more graduates. There will be a time lapse of some 10, 15 years from the beginning of that cycle to the end of that cycle, and some of us have felt there could be a critical need that we might face somewhere in that timeframe which the ordinary progression of events would not solve.

Do you feel any concern about the lack of trained technicians, scientists, engineering geologists, and geological engineers that are moving out of the mineral industry?

Secretary **Watt**. I do feel a concern, and there is tremendous demand for those kind of people today. In fact, one of the problems that these institutes have is keeping the professors there teaching to produce the students who are in such high demand. I think that men like yourself who have championed this program, even while you were in the Congress prior to coming to the Senate, should feel proud of the accomplishments that you have made because you have built the basic format that is now there and the demand for these people is so great now. There is no unemployment in the minerals or the energy field in America today because the consumers have such a tremendous demand, and we feel that the seed money that you and others have provided these past years has grown and bloomed and now the industry ought to be able to pay their own way, and the Federal Government doesn't need to continue this.

The **Chairman**. I don't question the ability of the industry to pay for the skills. I am questioning whether we have been able to get into the institutions of higher education enough people that are moving toward that market.

Secretary **Watt**. Well, I have met with some of the professors from the different universities and have promised them that I will do all that they might ask me to, including raising money for special chairs. At the University of Wyoming we have the Simpson Chair that was created to address this issue. There are some other chairs being created, and the universities are focusing on that. My alma mater has the Land and Water Resources Institute, the University of Utah does. New Mexico also has a good program. The schools are being flexible to meet the demands in engineering, law, and business, and this it is flourishing. I think the business community has moved, but not sufficiently, and should continue to move to augment and supplement those school funds for this kind of training.

The CHAIRMAN. Again, education isn't either your primary responsibility nor is it that of this committee, but I have noted over the last several years that we indeed have had more people going to business school. This reflects the fact that in order to be successful in business you have got to be a lawyer, a comptroller, or an accountant; not a production man. You see more and more people that are moving into the leadership of our industries in this country who know how to work the regulations and the tax laws but don't know how to produce anything. I think our country is suffering because of that. So yes, I do see right now a great burgeoning of both the demand and the supply in the business schools, but I don't see that burgeoning of interest in the technical field that yields improved productivity for our country.

I haven't found a lawyer or an accountant yet that increases productivity. They manage what somebody else produces.

Secretary WATT. All the nonlawyers say amen to that.

The CHAIRMAN. I am a lawyer, but I am concerned with the direction this country is going in.

Secretary WATT. Your concern is justified, and I have introduced you to a new concept. I believe what I am saying just as you believe what you are saying.

The CHAIRMAN. Thank you very much.

Senator BUMPERS. Mr. Chairman, are you getting ready to adjourn?

The CHAIRMAN. I had one other question that I wanted to ask with respect to the new starts. You are focusing, and I think quite properly, on water as a natural resource, and as a national priority. We go in cycles in this country, and when we hit a dry cycle in the popular areas of this country, we will have another national interest in water.

It is appropriate, I believe, that we get ahead of that cycle and start dealing with it at a time when the issue is not quite so critical so that we can reduce that when we get there.

I understand that the new starts and the increased funding that you have suggested are directed toward water projects and not toward the energy aspect of water projects?

Secretary WATT. Those are yet to be determined, but I am hopeful that it will be a multiple-use water project with possibly Indian use as well as energy, municipal, and agricultural potential.

The CHAIRMAN. One of the things that we have been focusing on as a matter of national policy, not necessarily just within the Department of the Interior, is to utilize those projects where falling water is now being generated by reassessment of the economic benefits and feasibility of adding additional generating capacity to existing projects.

If there is a reclamation project sitting there that has water that is falling, and the energy is not being utilized, is it possible that that comes within the purview of the definition of a new start—the addition of new facilities to an old project?

Secretary WATT. I suppose the answer politically should be yes, but I intend to have some real starts. Those are add-on, and I don't call those new starts from the way I have defined the word.

We need to invite and are inviting non-Federal interests to get involved in fund levels. The Auburn Dam has been at a standstill. It is going to cost $1.6 billion to finish that project. We are talking to State and non-Federal interests to see if they won't take that over and build it. It doesn't necessarily need to be national taxpayers who pay for that, but I wouldn't want to call adding a new powerplant, or a new generator or rewinding the generators, a new start. I should think it would be political trickery for me to tell you that I have a new start just because I rewound the coils on a generator.

I am talking about real new starts. We need water in America.

The CHAIRMAN. It is really dedicated primarily to the water project and the water resource rather than the energy resource?

Secretary WATT. Yes. I want real water, not just increased energy.

The CHAIRMAN. Thank you very much.

Senator BUMPERS. Let me say that I agree with some of the things you have said in your statement about hydropower; for example, allowing local people to build some of these projects is a good idea.

This is not your Department, but I couldn't get $700,000 just to complete a design study on the Loquin Dam on the Arkansas River. The dam will generate 44 megawatts of power, and we have about four viable applicants who will spend $100 million to build it. We would like to get the design study completed, so I really thought that was another case where we are being extremely shortsighted in the country, and I have no objection to what you said. On the contrary, I applaud it.

One other thing I want to say is that if I owe you an apology for referring to your religion a while ago, I certainly tender it. That's your business. You will never find a more intense advocate of freedom of religion than I am. You can believe whatever you want. I was making the point about my own religious tenet which says lotteries are wrong. When I was Governor of my State I was approached several times by people saying this is the ideal way to raise revenues. I opposed it there, and I oppose it everywhere, and certainly my comments were not intended to open any wound or to cast any aspersions at all about whatever your religious beliefs are. They are your business as far as I am concerned.

Mr. Chairman, there is one other thing I want to correct and that is the analogy regarding the 80 acres of Arkansas minerals and the comparable 80 acres leased by the U.S. Government. Earlier we were talking about how many applications at $75 per application it would take to equal the $8,200 that Arkansas received for 80 acres.

In that instance, the United States would only receive $80 because that land had never been leased before, and it would be let on a first-come, first-served basis for $1 an acre. So, a large disparity exists.

You mentioned that you intend to submit a revised payment-in-lieu-of-taxes bill at some point. Could you give us a little prelude as to what that may involve?

Secretary WATT. Yes, we feel that there is an inequity in the present statute dealing with payment in lieu of taxes in that some counties in the public land States are getting a payment in lieu of taxes plus mineral royalties, or revenues from timber sales. I hate to use the word double dipping, but maybe we know what that means. We don't think that is an equitable situation. The States, the counties, should get one or the other, but we should not continue the inequities in the system now under the statute.

I don't think there is really any opposition with any of us on that concept. Now we are trying to work out a formula that would be fair and equitable to the counties as we, the Federal Government, face up to our responsibilities of ownership to provide it. We had one formula that cost about $45 million. It was pointed out that when you applied that to some specific counties, there were tremendous inequities, so we are still trying to tinker with the formula and see if we can't do something that would be fair toward all as we face up to our responsibilities of ownership.

The CHAIRMAN. Would you yield on that point? As I recall our discussions last year, and over the last year, one of the problems was that in some States that payment in lieu of taxes flows through, as do mineral royalities, to local governments. In other States they treat it differently.

The search was for a formula that would try to protect the local revenues and the flow-through to local units of government without encouraging the States to shortstop all of the sources of revenues at the State level, and that the payment in lieu of taxes would be funded only to those where both of the revenues went through to the benefit of the local governments.

It has been an extremely difficult task to try to find a formula that reflects that philosophy.

Secretary WATT. Yes, it has.

Senator BUMPERS. It would be difficult without dictating to the States how they will handle their money.

The CHAIRMAN. That's right. As far as the Secretary knows, and I think everyone else does, to find that formula, we will listen, but until you find that formula we want to fund it.

Senator BUMPERS. I am really interested in this, and I am inclined to agree with you. My home county, under State law, gets a lot of money from payment in lieu. Then the quorum court, which is the governing body of the county, determines whether or not it wants to pass any of it down to municipalities or to the school district and so on. We just had a big lawsuit filed in Federal court in the western district of Arkansas the other day to force the counties to share that revenue with the school districts.

I am rather sympathetic to the school district; but on the other hand, I think that we have always deferred somewhat to the States and encouraged them to pass a law regarding the distribution of money. It is kind of a no-win situation up here for us if we get involved, but I would like to see that money spread around a little bit. Maybe your point in telling the States that they can have one but not both would solve the problem. Then the legislature would have to deal with a different distribution formula with at least one of those funds.

The CHAIRMAN. What the States have attempted to do now, and some did before you passed the payment in lieu of taxes legislation, is enact statutes to stop at the State level one or the other sources of funding, allowing the local governments to benefit from the other, in the expectation that the Federal Government would permit them to make that choice. This therefore doubles the amount which the State and local governments in combination would get, or at least doubles the sources.

Senator BUMPERS. Mr. Secretary, one other thing. You mentioned in your statement that part of your good neighbor policy was accomplished by returning to the States primary authority to allocate water resources.

Could you give me just a short statement as to what you mean by that?

Secretary WATT. Yes, we reversed an opinion in the Department of the Interior that preempted all nonreserved water and claimed that it was owned by the Federal Government. The issue is paramount in importance in the Western States that are public land States because the argument was made that since the water or the flow arise on the Federal Lands, the waters are the Federal Government's. That is contrary to 100 years of water law history, and it was introduced I think in 1979 by the previous administration, by a solicitor by the name of Krulitz. The Krulitz opinion became a war cry in the Western States. When I went to the Western Governors Conference in September I announced we were reversing that, and all the Governors cheered and threw their hats in the air, and States' rights prevailed on water use again.

Senator BUMPERS. I have not read that solicitor's opinion. My staff mentioned it to me this morning. I wasn't aware of it. I will have to look at it, and Mr. Chairman, I am going to submit additional questions on that.

I have one additional comment. The one place where I do take exception to the policies that you are implementing, Mr. Secretary, is with regard to the constant proposals to the land and water conservation fund to provide more for rehabilitation and not for acquisition.

I think you probably have a different philosophy about land acquisition from mine, but it occurs to me that at least we need to deal with those parks that have been authorized. We have to deauthorize to acquire the lands; and while I have no quarrel at all with your proposal to rehabilitate and upgrade the facilities in the national parks, I don't think that that is inconsistent with more land acquisition of the parks that are already authorized. In the long run we may save ourselves tons of money, depending on what land values do. Land values might escalate like they were at one time. I don't understand why we couldn't use the land and water conservation fund, if you are going to amend it, to acquire lands. As you know, we have a lot of landowners out there who are hanging by their thumbs.

Secretary WATT. That's right.

Senator BUMPERS. And I would like to relieve them at the earliest possible time.

Secretary WATT. There is about $3 billion worth of land that is hanging just as you described it.

Senator BUMPERS. Is that in today's dollars?

Secretary WATT. That is in today's dollars.

Senator BUMPERS. I think that may be a philosophical difference you and I have on that point.

Mr. Chairman, I want to reserve the right to maybe submit three more questions to the Secretary.

The CHAIRMAN. We will leave the record open so the questions can be submitted in writing to the Secretary. I would hope that they would be submitted in the next day or two so the Secretary can give responses back to us and include them in the record very promptly. Otherwise they will not be of any assistance to us in developing our submission to the Budget Committee by March 15.

I also have two questions to be submitted for the record that have been submitted by Senator Hatfield, and I will ask that you respond very promptly to those questions so they, too, can be included in the record.[1]

Senator WALLOP. Mr. Chairman, I just have two brief statements, not questions. One is, I very much want to compliment Dale on his kind and generous remarks about the Secretary's position and your own. I think they were just splendid.

Senator BUMPERS. Thank you.

Senator WALLOP. I believe that was a very helpful gesture.

Second, just to set the record straight, on the Island Park, Yellowstone kind of thing. As the Secretary well knows, I conducted a hearing in Casper, Wyo., where we had experts in the field from USGS, and volcanologists from Stanford University and other places. We developed a record which the Secretary is well aware of, what it would take to relieve any inference of potential damage, and I have talked with them and talked with the chairman, and I see no threat to resolving any inference of damage. Obviously, nobody wants to be the Secretary of the Interior that presides over the demise of Old Faithful. No company wants to be the company that presides over the development that did that. No chairman of this committee wants to, and certainly no Senator from Wyoming wants to. There is plenty of reason to proceed with caution on that thing, and there is plenty of means by which that caution can be exercised.

I have gotten assurances from the Secretary and the chairman that they want to do that, and now I am not worried that we are on the threshold of any kind of rash action.

Secretary WATT. Thank you, Senator.

The CHAIRMAN. I appreciate the statement the Senator has made, and I appreciate its being made on the record. I, too, share the absolute determination, and the Secretary does, that nobody is going to do something that poses a threat to support those actions in Yellowstone National Park.

At the same time, we have to formulate policy directions either from the Congress or from the Department in such a way that they don't become absolute prohibitions beyond reason, and that is the delicate balance that is being struck in terms of the words that are being used. There are those who would rather than strike the balance simply have it unbalanced in one way or the other.

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[1] See appendix I, p. 237, for responses to additional committee questions.

I appreciate the statement that the Senator from Wyoming has made. Certainly no one knows better than I, his determination to see that the assets the Nation has within Yellowstone are fully protected, and I share that absolute demand that they will be, and I know the Secretary does, too.

Are there further questions?

[No response.]

The **Chairman**. If not, the committee stands in adjournment.

[Whereupon, at 12:30 p.m., the hearing was adjourned.]

APPENDIX I

Responses From Secretary Watt to Additional Committee Questions

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JAMES A. MC CLURE, IDAHO, CHAIRMAN

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D. MICHAEL HARVEY, CHIEF COUNSEL FOR THE MINORITY

United States Senate
COMMITTEE ON
ENERGY AND NATURAL RESOURCES
WASHINGTON, D.C. 20510

February 19, 1982

The Honorable James G. Watt
Secretary
Department of the Interior
18th and E Streets, N.W.
Washington, D.C. 20240

Dear Mr. Secretary:

On behalf of the Committee on Energy and Natural Resources, I wish to express its appreciation for your contribution to our understanding of President Reagan's proposed budget for Fiscal Year 1983.

In connection with your testimony, enclosed are questions for the record. Your response by Thursday, February 25, 1982 would be appreciated. Your response and any inquiries regarding this request should be directed to the attention of Richard D. Grundy, professional staff member at (224-2564).

Sincerely yours,

James A. McClure

James A. McClure
Chairman

JAM:nm

Questions for Secretary James G. Watt
Energy Committee hearing on Department of the Interior's
FY '83 budget request
February 9, 1982

1. Funding for the Cooperative Wildlife and Fishery Research Units, recommended for termination in the President's budget for FY 1982, was restored by the Congress. They were again proposed for termination in the FY 1983 budget. Cooperative Fishery Units in Washington, Idaho, Oregon and California are involved in 38 projects directed toward solving the anadromous salmon run problems. In the northeastern part of the United States those Fishery Units are conducting approximately 50% of the research project on Atlantic salmon. Procedures for stream evaluation on the lower Mississippi are being developed by Fishery Units. What is the rationale for eliminating a broadly based research program which serves such a critical need?

2. According to the Fish and Wildlife Service annual report, in 1979, 40% of the research publications were done in the Cooperative Fishery and Wildlife Units at approximately 15% of the Fish and Wildlife Service budget or five million dollars. In 1980, 24% of the research publications were from Unit sources--again for the same five million dollars. Why does the Fish and Wildlife Service wish to retain research programs which apparently are less cost effective and eliminate the Cooperative Wildlife and Fishery programs?

3. Territories

a. In the FY 1983 request, only $4 million (BA) is budgeted for construction of a new hospital on Saipan. Obviously, $4 million is insufficient to cover the cost of the hospital and is also insufficient to sign·full contracts.

-Does this request indicate a substantially reduced level of Federal commitment to this project?
-If so, what is that level?
-How much BA is needed to complete the hospital?
-What is the capability for FY 1983?

b. In the FY 1983 request, only $7.8 million (BA) is budgeted for capital relocations in the Marshall Islands, the Federated States and Palau.

-Does this reduced level indicate a reduction in the level of the Federal commitment to this project?
-If so, what is the level?
-How much BA is needed to complete these projects and what is the capability for FY 1983?

c. The budget documents indicate that a proposal will be made to consolidate nutrition assistance in the territories, and the BA request for these programs is substantially reduced from FY 1982 (a reduction from $958 million in FY 1982 to $869 million in FY 1983--a reduction of about $87 million).

-Why was this committee not consulted in advance on this substantive change?
-What precisely do you propose to change or consolidate and when will legislation be submitted?
-Were the respective territorial governments consulted about this?

4. Land and Water Conservation Fund

a. Does the Administration plan to submit a rescission for any of the funds appropriated in 1982 for Federal land acquisition? If so, when and for what?

b. What is the status of each project for which acquisition funds were made available in H.R. 4035 under (a) the National Park Park Service (b) the Fish and Wildlife Service and (c) the Bureau of Land Management?

-When will funds be allocated to the Jean Lafitte Park and to the Bogue Chitto Refuge in Louisiana?
-What is the status of the land value assessment now underway at the Tensas Refuge in Louisiana?

c. The Department has again requested significant funds for restoration of the national parks. When will you have a list of specific projects to be undertaken prepared for this committee? Which of these projects will be included in the request for FY 1983? Which of these involve safety or health issues?

-As in FY 1982, the Department has requested no funds for new land acquisition. As I stated last year, I find this short-sighted and penny wise-pound foolish.

- If the Congress were to make, say, $100 million available for parks acquisition, which projects would you consider the highest priority? Please submit a detailed list for the record.

d. With regard to the narrative on the request for the National Park Service, I would comment that the amendment I offered to the Interior appropriations bill for FY 1982 contained more than sufficient funds to cover court awards. A significant portion was lost in conference, not due to lack of Senate support for that amount, but in part due to the Department's failure to write a letter of appeal to the House on the lower House number. I hope the Department will work more closely with us this year as we develop the budget and that an active role will be taken on items like court awards that the Department obviously considers a priority.

-Will you give us a commitment on this sort of cooperation and support?

5. Historic Preservation Fund

a. No funds are requested in the FY 1983 budget for the Historic Preservation Fund, which as you know provides matching funds to the states to carry out Federally mandated activities such as certifying structures as eligible for tax incentives and processing nominations to the National Register. As I understand it, the Administration's preservation policy hinges on use of the preservation tax incentives, yet these in turn are dependent upon adequate funding of state offices to undertake the necessary work for eligibility determination.

-How do you propose to make sure that nominations are processed and the certification process continues absent HPF grants? Will DOI now assume responsibilities previously delegated to the states?
-Would you increase staff?

b. Internal Department studies show that use of the states is a more cost-effective way of carrying out Federal preservation responsibilities. Did you take these studies into account in reaching your decision?

c. It is my understanding that OMB recommended continued support for the National Trust. Why did you refuse it?

d. How do you expect the Trust to maintain its properties and carry out its private sector activities with a sudden elimination of a substantial part of its budget?

6. OCS Leases

a. The FY 1983 budget request assumes that OCS lease sales will result in a substantial increase in offsetting receipts, rising as I read it from about $8 billion in FY 1982 to $18 billion in FY 1983. I further understand that the same number of sales will be offered although the acreage will be increased. Is this correct?

b. Please furnish a list of specific tracts to be offered, where these tracts are located, how many acres are involved, what you expect the per acre yield to be, data from the last three years on other sales in those areas on a per acre basis and, for each projected sale, whether or not baseline environmental data is available and whether or not an EIS has been prepared.

c. Please furnish a breakdown from the last five years of the Geological Survey budget for all environmental data gathering activities connected with the Outer Continental Shelf. Please furnish us with the same information for similar activities conducted by the Fish and Wildlife Service and any other part of the Interior Department now or previously having responsibility for gathering baseline information or other data used in preparing EISes for OCS activities.

7. Mr. Secretary, the Department's budget request for the Bureau of Land Management increases are recommended for Onshore and Offshore Minerals Management, Energy and Non-Energy Related Realty, and Fire Management. Decreased funding levels are requested for Forest and Range Management, Recreation Management, Wildlife Habitat Work, and Soil, Water, and Air Management.

Do you think that such a budget reflects a balanced approach to resource management of the public lands?

LAND AND WATER CONSERVATION FUND

8. Why does the Department continue to support amending the Land and Water Conservation Fund Act to permit the use of these funds for rehabilitation and maintenance?

Can't you perform the same type of work with regular appropriations? You really do not need such an amendment to implement your park rehabilitation program, do you?

RECEIPTS

9. Mr. Secretary, the Department's FY 1983 budget estimates that oil and gas receipts from the Outer Continental Shelf will total $18,000,000,000 next year. This amount is more than twice the level expected to be collected in FY 1982. Is this a realistic figure? What are the assumptions underlying this estimate? What indications do you have from the industry that they have the resources and the inclination sufficient to undertake such an ambitious program?

10. Mr. Secretary, in your statement you say that the Department has "instituted a near moratorium on adding new units to the park system until needed work in existing parks can be accomplished and previous acquisitions paid for."

While I have no serious quarrel with the first condition, I am somewhat confounded by the second. How can we ever reduce the backlog of authorized but unacquired park lands if the Administration continues to oppose all but token land acquisition funding while at the same time seeking to drain off Land and Water Conservation Fund monies for rehabilitation and repair?

If new federal park and recreation areas in this nation are dependent on eliminating the land acquisition backlog under the amounts you propose, then I think there is little chance of any new areas in the foreseeable future.

BLM WILDERNESS REVIEW - MINERAL SURVEYS

11. Mr. Secretary, the budget proposes a reduction in the amount of funding available for mineral surveys on BLM wilderness study areas. The Budget Highlights booklet states that:

> "This cut is a result of a decision to conduct such surveys only on areas determined potentially suitable for recommendation as wilderness."

Sec. 603(a) of the Federal Land Policy and Management Act provides that no wilderness recommendation is to be made until a mineral survey by the U.S. Geological Survey and the Bureau of Mines has been conducted.

Given these facts, are you not using the budget process to predetermine what wilderness areas the President will recommend to the Congress for inclusion in the Wilderness System?

FEES

12. The President's budget anticipates significant increases in recreation, entrance, and user fees for areas administered by the National Park Service, the Bureau of Land Management, and the U.S. Fish and Wildlife Service. Can you tell us something about the nature of the legislation you plan to submit to affect some of these changes?

13. Are you working with the Department of Agriculture in the preparation of a proposal to institute some type of general "Public Lands User Fee"?

14. When might we expect these legislative initiatives?

15. I understand that the National Park Service will shortly announce significant increases in user fees for campgrounds, parking, etc. When will we have specific information on the units affected, the particular increases involved, etc.?

16. Assuming the Congress gives you the authority to raise entrance fees at units of the National Park System, how much additional revenue would you contemplate raising in this manner?

17. Bureau of Land Management

In your statement, you state your intent to focus on reducing the backlog of leasing applications in the onshore oil and gas program in 1983.

The deadline for issuing leases in wilderness areas is December 31, 1983.

Do you intend to give priority to lease applications for wilderness areas in the first quarter of FY 83, in order to process these applications before the wilderness leasing deadline of December 31?

Office of Surface Mining

18. Do you expect to ask for any changes in the 1977 Surface Mining Control and Reclamation Act?

19. OSM did not meet its announced schedule for approving state programs last year. Yet you state that you expect that all but 3 coal producing States will have assumed primacy for regulating surface mining by this October 1. Consequently, your budget request includes significant decreases in federal regulation funds and particularly in funds for inspection and enforcement. On what basis are you assuming that nearly all States will have primacy by the end of this year?

20. Even if you meet your schedule for approving State programs, will this greatly reduced inspection and enforcement budget be adequate to ensure that the requirements of the 1977 legislation are met?

21. You plan to reduce the Bureau of Mines' minerals health and safety technology program by $8.2 million. What projects will not be done?

22. What are the "high risk areas with long-term payoffs" that Mines research will be emphasizing?

23. The Department's news release on the 1983 Budget states that an increase in spending for the onshore oil and gas lease regulation program will be offset by a decrease in the coal program, "which will place more reliance on data obtained through industry exploration licenses."

Does that mean that more money will be spent on oil and gas royalty management, and that this increase will be offset by decreases in the amount of money spent on coal royalty management?

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24. The Department's news release on the 1983 budget states that no fiscal year 1983 funding is proposed for the Mineral Institutes "because other sources of public and private support are expected to be available to the Mineral Institutes to help meet their program objectives."

Specifically, what other sources of public support do you realistically expect?

DEPARTMENT OF THE INTERIOR

Answers to Questions from Budget Hearing on February 9, 1982

COOPERATIVE RESEARCH UNITS

1. Question: Funding for the Cooperative Wildlife and Fishery Research Units, recommended for termination in the President's budget for FY 1982, was restored by the Congress. They were again proposed for termination in the FY 1983 budget. Cooperative Fishery Units in Washington, Idaho, Oregon and California are involved in 38 projects directed toward solving the anadromous salmon run problems. In the northeastern part of the United States, those Fishery Units are conducting approximately 50% of the research project on Alantic salmon. Procedures for stream evaluation on the lower Mississippi are being developed by Fishery Units. What is the rationale for eliminating a broadly based research program which serves such a critical need?

Answer: Because of growth in university fish and wildlife training programs, and because many State fish and wildlife agencies have their own research programs, Federal funding in the Cooperative Research Unit program is no longer necessary. In addition, the States have the option to utilize the increases estimated in receipts under the Federal aid for fish and wildlife restoration accounts to continue to finance priority work undertaken by the cooperative research unit. The Fish and Wildlife Service would do the anadromous fishery work of significant Federal interest through their Seattle National Fishery Laboratory.

2. Question: According to the Fish and Wildlife Service annual report, in 1979, 40% of the research publications were done in the Cooperative Fishery and Wildlife Units at approximately 15% of the Fish and Wildlife Service budget or five million dollars. In 1980, 24% of the research publications were from Unit sources--again for the same five million dollars. Why does the Fish and Wildlife Service wish to retain research programs which apparently are less cost effective and eliminate the Cooperative Wildlife and Fishery programs?

Answer: Some research conducted is of lesser priority for Federal involvement. However, we are also reducing fisheries research functions in FY 1983, such as the Reservoir Investigations program, while retaining research of particular Federal interest. The States have considerable flexibility under Federal aid programs discussed above to conduct priority research activities.

TERRITORIAL AFFAIRS

3. (a) Question: In the FY 1983 request, only $4 million (BA) is budgeted for construction of a new hospital in Saipan. Obviously, $4 million is insufficient to cover the cost of the hospital and is also insufficient to sign full contracts. Does this request indicate a substantially reduced level of Federal commitment to this project? If so, what is that level? How much BA is needed to complete the hospital? What is the capability for FY 1983?

Answer: The request for $4 million represents the Federal share of the anticipated costs of building the new hopsital that will be incurred in FY 1983. The Administration has not retreated from its financial commitment to help the Northern Marianas build a new hospital on Saipan. Construction is not anticipated to begin until mid-calendar year 1983, and accordingly, we believe that our $4 million contribution, together with whatever Covenant funds the Northern Marianas Government allocates to the project, will sufficiently cover all construction costs in FY 1983. The design chosen by the Northern Marianas government is for a hospital with a total cost estimated to be $25.2 million, including the architectural and engineering design. Construction can begin on the new hospital by the fourth quarter in FY 1983.

3.(b) Question: In the FY 1983 request, only $7.8 million (BA) is budgeted for capital relocations in the Marshall Islands, the Federated States and Palau. Does this reduced level indicate a reduction in the level of the Federal commitment to this project? If so, what is the level? How much BA is needed to complete these projects and what is the capability for FY 1983?

Answer: The commitment of the United States for the contribution to the cost of constructing new capitals in the three Micronesian entities has always been $21 million. A total of $2.88 million was appropriated for design work in FY 1982, and $7.8 million is now requested for the initiation of the actual construction in FY 1983. When the design is completed, we will be able to determine exactly what the total cost of the three capitals will be and during what budget periods we will seek the balance of the $21 million.

3.(c) Question: The budget documents indicate that a proposal will be made to consolidate nutrition assistance in the territories, and the BA request for these programs is substantially reduced from FY 1982 (a reduction from $958 million in FY 1982 to $869 million in FY 1983--a reduction of about $87 million). Why was this committee not consulted in advance on this substantive change? What precisely do you propose to change or consolidate and when will legislation be submitted? Were the respective territorial governments consulted about this?

Answer: The consolidation of nutrition assistance programs in FY 1983 has been proposed by the Department of Agriculture. The Department of the Interior was not a party to this decision. As we understand it, the Department of Agriculture's grant consolidation proposal is already authorized by P.L. 95-134. It will consolidate all Department of Agriculture feeding programs for the U.S. territories in one grant, waiving more than 300 pages of Federal regulations and program reporting requirements. Since the Department of the Interior was not involved in the decision, it would be inappropriate for us to comment on the question of consultation.

LAND AND WATER CONSERVATION FUND

4.(a) Question: Does the Administration plan to submit a rescission for any of the funds appropriated in 1982 for Federal land acquisition? If so, when and for what?

Answer: The Administration does not plan at this time to submit a rescission for any funds appropriated in fiscal year 1982 for Federal land acquisition.

4.(b) Question: What is the status of each project for which acquisition funds were made available in H.R. 4035 under the National Park Service, the Fish and Wildlife Service, and the Bureau of Land Management?

The status of each project in the National Park Service for which acquisition funds were made available in H.R. 4035 is shown on the following table:

National Park Service
Land and Water Conservation Fund
Status of Projects

Area	Amount Appropriated ($000)	Obligation 1/31/82 ($000)	Remarks
Acquisition Management	$ 8,160	$ 2,250	
Deficiencies	960	240	Anticipate balance of funds to be obligated by 2/28/82.
Inholdings	960	0	With limited funds, major emphasis will be on emergencies and hardship acquisitions.
Allegheny Portage NHS ✓	480	0	Program continuing with unobligated carryover from F.Y. 1981.
Appalachian NS Trail	2,688	0	Negotiations underway on key tracts.
Big Cypress NPres.	5,904	281	Anticipate balance of funds to be obligated to pay court deficiencies by 2/28/82.
Biscayne NP	1,920	0	Mapping underway. Alternatives to fee acquisition being studied.
Buffalo N.River	2,112	0	Funds will be used to pay condemnation deficiencies.
Channel Islands NP	3,840	0	Case study underway to review alternatives to fee acquisition.
Chattahoochee River NRA	13,920	13,920	Transaction on River Properties, Inc. closed.
Cumberland Island NS	9,600	9,600	Transaction with TPL closed.
Cuyahoga Valley NRA	4,800	0	Appraisals ordered. Negotiations underway.
Delaware Water Gap NRA	960	0	Program currently being conducted with carryover funds.
Ebey's Landing NHRes.	2,016	0	Appraisals are being ordered.

Area	Amount Appropriated ($000)	Obligation 1/31/82 ($000)	Remarks
Fort Sumter NM	368	0	Location of terminal site being reviewed.
Golden Gate NRA (Sweeney Ridge)	9,600	0	Appraisal being ordered. Funds earmarked for reprogramming.
Indiana Dunes NL	2,304	0	Appraisals underway.
Jean Lafitte NHP	2,400	0	Negotiations underway on priority tracts.
Lower St. Croix NSR	960	0	Funds will be used for additional payments that result from renegotiation of previously acquired tracts where local zoning had been considered.
New River Gorge NR	1,920	0	Appraisals ordered on first priority tracts. utilizing carryover funds. Waiting completion of general development and land protection plan so other priorities can be identified.
Redwood NP	2,880	0	Funds are being transferred to Department of Justice to continue litigation support work.
Saint Croix WSR	480	0	Negotiation underway with willing sellers.
San Antonio Missions NHP	1,344	0	Appraisals are being ordered.
Santa Monica Mtns NRA	4,800	0	One offer on hand, waiting review of mineral appraisal; appraisal being reviewed on other priority tracts.
Upper Delaware Scenic River	576	0	Land acquisition needs under review. Major emphasis will be on alternatives to fee acquisition.
Valley Forge NHP	3,840	0	Solicitation for appraisal submitted for first three priority tracts; orders for other appraisals underway.
Virgin Islands NP	3,408	3,408	Hassell Island transaction closed.
Totals	$93,200	$29,699	

With regard to the Fish and Wildlife Service, estimated obligations as of February 28 totaled $824,000, as shown on the following table:

($000)

Unit	Appropriated	Obligated
Acquisition Management	$ 997	$ 50
Bon Secour NWR	3,360	---
San Francisco Bay NWR	960	---
Tensas River NWR	4,800	---
Bogue Chitto NWR	1,920	250
California Condor	1,151	---
Trustom Pond NWR	423	423
Emergencies and Inholdings	144	101
Alaska Maritime NWR	1,920	---
	$15,675	$ 824

The status of each project is as follows:

Acquisition Management: This funding is being utilized primarily for the appraisal and negotiation of land exchanges within authorized projects. Currently, over 35 exchanges are under negotiation. One exchange involves about 25,000 acres with the State of Arizona. Equal value exchanges are difficult to complete without the availability of funds for equalization payments.

Bon Secour NWR: Through FY 1981, 2,061 acres of the authorized 10,000 acres have been acquired. An additional 3,000 acres are to be acquired with the FY 1982 appropriation. The appraisals are nearly complete. Purchase agreements totaling approximately $2 million are anticipated in April. The remaining funds are anticipated to be obligated during the remainder of the fiscal year.

San Francisico Bay NWR: Through FY 1981, 15,401 acres of the authorized 21,000 acres has been acquired. The appraisals of the tracts to be acquired with the FY 1982 appropriation have been contracted. These appraisals should be completed by April. Negotiations and land obligations will soon follow.

Tensas River NWR: The FY 1982 appropriation is the initial start for this 50,000-acre refuge. The appraisal on Tensas River has been updated and approved. The acquisition of about 17,000 acres within the Judd Brake Unit of the refuge is pending the availability of the Corps of Engineers' $5 million. The Corps is currently withholding these funds since the projects are not funded for which the Tensas River Refuge is to mitigate wildlife habitat losses. This Department has requested that the Department of the Army release the Tensas River appropriation for its purchase.

Bogue Chitto NWR: Through FY 1981, 15,817 acres of this 40,000-acre refuge has been acquired. To date, $250,000 of the FY 1982 appropriation has been obligated for the purchase of 1,100 acres. Appraisals have just been completed on an additional 2,500 acres comprising six ownerships and agreements are expected by the end of May. An additional 2,500 acres involving an exchange and purchase will be acquired prior to the end of the fiscal year.

California Condor: This funding is for the acquisition of critical habitat on the Blue Ridge Unit. Currently, appraisals are being conducted. As appraisal values are approved, negotiations will begin. Land acquisition obligations will be made during April and May.

Trustom Pond NWR: To date, $422,400 of the FY 1982 appropriation has been obligated for the purchase of 62 acres. Initially, $440,000 was needed to acquire 63 acres. The four percent appropriation reduction necessitated leaving a one-acre residential lot valued at $17,600 omitted from the acquisition. The one-acre lot has been optioned and the Service is in the process of reprograming prior year carryover funds for its acquisition.

Emergencies and Inholdings: A deficiency payment, including interest, totaling $190,500 has been made for the Declaration of Taking on Bear Valley NWR filed in 1978. Unless another emergency acquisition arises, the remaining funding under this appropriation will be utilized for equalization payments on exchanges involving inholdings within refuges.

Alaska Maritime NWR: The FY 1982 appropriation is to acquire part of the refuge lands as stated within the Pribilof Terms and Conditions Agreement, ratified by Congress and contained within Alaska National Interest Land Conservation Act of December 2, 1980. A dispute over the division of this appropriation between the two native corporations delayed the acquisition. This dispute has recently been settled and the acquisition may now proceed. This year's acquisition is expected to be completed in April.

The Bureau of Land Management's FY 1982 Land Acquisition appropriation was $3,012,000, with $295,000 for Acquisition Management, $672,000 for the King Range National Conservation Area, $125,000 for the Pacific Crest Trail, and $1,920,000 for the Yaquina Head Outstanding National Area. The purchase of the Pacific Crest parcel will open up 130 miles of trail to public use. On the King Range, BLM is currently negotiating for three coastal tracts and one interior tract that together total 184 acres, in addition to the acquisition by exchange of 4,626 acres. Negotiations are progressing on Yaquina Head to acquire the necessary 60 acres of private land.

Question: When will funds be allocated to the Jean Lafitte Park and to the Bogue Chitto Refuge in Louisiana? What is the status of the land value assessment now underway at the Tensas Refuge in Louisiana?

Answer: Funds are being allocated to Jean Lafitte NHP. Negotiations are underway. Obligations this fiscal year of carryover funds totaled $1.3 million as of January 31, 1982. With regard to the Bogue Chitto NWR, as indicated, through FY 1981, 15,817 acres of this 40,000-acre refuge has been acquired. To date, $250,000 of the FY 1982 appropriation has been obligated for the purchase of 1,100 acres. Appraisals have just been completed on 2,500 more acres comprising six ownerships and agreements are expected in May. An additional 2,500 acres involving an exchange and purchase will be acquired before the end of the fiscal year. The 1982 appropriation is the initial start for the 50,000-acre Tensas River NWR. As indicated, the appraisal on Tensas River has been updated and approved. Acquisition of 17,000 acres within the Judd Brake Unit of the refuge is pending availability of $5 million from the Corps of Engineers.

4.(c) Question: The Department has again requested significant funds for restoration of the national parks. When will you have a list of specific projects to be undertaken prepared for this committee? Which of these projects will be included in the request for FY 1982? Which of these involve safety or health issues?

Answer: Fiscal 1983 Park Restoration and Improvement Program lists of projects are currently being developed for health and safety and for the Cultural Resources Preservation Program. We expect to finalize these lists by March 15. Project specific listings for the Construction Program are contained in the 1983 Budget Justifications. As for the Health and Safety Program for 1983, a level of effort at least as large as that in 1982 will be undertaken.

Question: As in FY 1982, the Department has requested no funds for new land acquisition. As I stated last year, I find this short-sighted and penny-wise-pound foolish. If the Congress were to make, say, $100 million available for parks acquisition, which projects would you consider the highest priority? Please submit a detailed list for the record.

Answer: A detailed list is provided on the following table:

4.(d) Question: With regard to the narrative on the request for the National Park Service, I would comment that the amendment I offered to the Interior appropriations bill for FY 1982 contained more than sufficient funds to cover court awards. A significant portion was lost in conference, not due to lack of Senate support for that amount, but in part due to the Department's failure to write a letter of appeal to the House on the lower House number. I hope the Department will work more closely with us this year as we develop the budget and that an active role will be taken on items like court awards that the Department obviously considers a priority. Will you give us a commitment on this sort of cooperation and support?

Answer: The ability to pay court awards has been given first priority in the fiscal year 1983 budget request. The Department will inform Congress of any additional deficiency shortfalls expected in fiscal year 1983 not currently covered in our budget request.

National Park Service
Land and Water Conservation Fund
$100 Million
Budget Level

AREA	AMOUNT
Acquisition Management	8,500,000 1/
Inholdings	3,800,000
Deficiencies	2,200,000
Appalachian NS Trail	4,000,000 *
Big Cypress N. Pres	14,000,000
Big Thicket N. Pres.	4,500,000
Biscayne NP	2,000,000 *
Cape Cod NS	6,500,000
Cape Lookout NS	2,000,000
Chaco Culture NHP	2,000,000 *
Coronado NMem.	500,000 *
Cumberland Is. NS	1,000,000
Cuyahoga Valley NRA	3,000,000 *
Delaware Water Gap NRA	500,000 *
Golden Gate NRA	1,500,000 *
Gulf Islands NS	3,700,000
Indiana Dunes NL	1,000,000 *
Jean Lafitte NHP & Pres.	1,000,000 *
Lower St. Croix NSR	2,000,000 *
Manassas NBP	2,000,000 *
Lassen Volcanic NP	5,500,000
Martin Luther King,Jr. NHS	1,000,000 *
Monocacy NB	1,500,000 *
Point Reyes NS	2,000,000 *
Redwood NP (101 Relocation)	8,000,000 *
Sequoia NP (Mineral King)	1,000,000 *
Sleeping Bear Dunes NL	8,400,000
Valley Forge NHP	1,500,000 *
Voyageurs NP	3,800,000
War in the Pacific NHP	984,000 *
Women's Rights NHP	490,000 *
Pinelands N. Pres.	126,000
TOTAL	$ 100,000,000

1/ To retain administrative cost at FY 1982 level

* Subject to adjustment pending completion of current land protection strategy case studies

February 26, 1982

HISTORIC PRESERVATION FUND

5.(a) Question: No funds are requested in the FY 1983 budget for the Historic Preservation Fund, which as you know provides matching funds to the states to carry out Federally mandated activities such as certifying structures as eligible for tax incentives and processing nominations to the National Register. As I under-stand it, the Administration's preservation policy hinges on use of the preservation tax incentives, yet these in turn are dependent upon adequate funding of state offices to undertake the necessary work for eligibility determination. How do you propose to make sure that nominations are processed and the certification process continues absent HPF grants? Will DOI now assume responsibilities previously delegated to the states? Would you increase staff?

Answer: The Department believes that non-Federal Historic Preservation Programs are important, but that responsibility for funding must rest with State and local governments. Further, State and local governments will recognize the benefits, both immediate and long term, of such programs enough to see their survival without continued Federal grant assistance. The Department acknowledges the responsibility of Federal agencies to comply with preservation law, and expects them to budget for whatever services they need that are now supported by Historic Preservation grants. The fiscal 1983 budget request includes a $650,000 increase to augment the tax benefit program. The potential loss of State Historic Preservation's staff funding, coupled with an enhanced tax incentive program for the preservation of historic properties, will double the workload at the Federal level. This additional funding will assist in assuming the Tax Certification workload now carried on by the States. To facilitate the efficient processing of the certifications, the staff would be increased in fiscal 1983.

5.(b) Question: Internal Department studies show that use of the States is a more cost-effective way of carrying out Federal preservation responsibilities. Did you take these studies into account in reaching your decision?

Answer: The Department has provided useful seed money for the support of State Historic Preservation Offices. The States will have to continue their inventory of historic places and to integrate their work more carefully with State planning efforts if State and local governments are to reduce Federal support for development projects. Further Federal subsidies should end before this program expands into a permanent Federal commitment to sustain what is primarily a State responsibility. The studies to which you refer are currently being reviewed.

5.(c) Question: It is my understanding that OMB recommended continued support for the National Trust. Why did you refuse it?

Answer: The National Trust for Historic Preservation is a fine example of Federal support and voluntary effort which have combined well in promoting a public purpose. From a practical point of view, however, it is in the future interest of historic preservation to move rapidly and creatively away from its dependent relationship on the Federal government.

5.(d) Question: How do you expect the Trust to maintain its properties and carry out its private sector activities with a sudden elimination of a substantial part of its budget?

Answer: The Department believes that without Federal support the Trust will develop other sources of support and initiate a better relationship with concerned private sector organizations to further historic preservation.

OCS SALES

6.(a) Question: The FY 1983 budget request assumes that OCS lease sales will result in a substantial increase in offsetting receipts, rising as I read it from about $8 billion in FY 1982 to $18 billion in FY 19853. I further understand that the same number of sales will be offered although the acreage will be increased. Is this correct?

Answer: Under the proposed 5-year leasing schedule we issued in July 1981 there are seven sales planned for FY 1982 and nine sales planned for FY 1983. By adopting our streamlining proposals and eliminating the tract selection approach to design of sales, however, we will increase the acreage offered from about 13 million acres to over 200 million acres -- a fifteen fold increase.

6.(b) Question: Please furnish a list of specific tracts to be offered, where these tracts are located, how many acres are involved, what you expect the per acre yield to be, data from the last three years on other sales in those areas on a per acre basis and, for each projected sale, whether or not baseline environmental data is available and whether or not an EIS has been prepared.

Answer: For many of the sales scheduled to be held in FY 1983 the Area Identification step has yet to be decided upon by the Department. Consequently specific details are not available on some of the sales although a rough approximation of some components of the sales is possible. The following table summarizes the data available. Since these sales are a considerable distance in the future the data should be viewed with caution and are subject to further refinement. See attached chart.

6.(c) Question. Please furnish a breakdown from the last five years of the Geological Survey budget for all environmental data gathering activities connected with the Outer Continental Shelf. Please furnish us with the same information for similar activities conducted by the Fish and Wildlife Service and any other part of the Interior Department now or previously having responsibility for gathering baseline information or other data used in preparing EIS's for OCS activities.

Answer: The table below shows total obligations incurred or to be incurred by Interior bureaus for all environmental data gathering activities connected with the Outer Continental Shelf:

Bureau	Fiscal Years in Millions of Dollars 1979	1980	1981	1982	1983
U.S. Geological Survey	9.3	23.3	11.9	8.9	9.1
U.S. Fish & Wildlife Service	0.3	0.3	0.3	0.3	0.3
Bureau of Land Management	26.5	45.7 a/	36.5	29.1	30.3
Total, Department of the Interior	36.1	69.3	48.7	38.3	39.7

a/ This figure includes $7.5 million of a $7.7 million supplemental which was approved during late FY 1979 with the condition that funds could be obligated in FY 1980.

DEPARTMENT OF THE INTERIOR

FY 1983 OCS Sales

Sale No.	Area	No. of Tracts	No. of Acres (Millions)	Expected Bonus 1/ (Millions)	Previous Sales Bonus per Acre	Baseline Envir. Data Available	EIS Pre-pared
69	Gulf of Mexico	269	1.4	$1,067	Sale 67 - $1,120e Sale 66 - $2,446 Sale A66- $3,312	Yes	FEIS Release
57	Norton Basin	429	2.4	192	None	Yes	DEIS Release
73	C & N Calif.	N.A.	<24 e	499	Sale 53 - $3,773	Yes	--
70	St. George Basin	479	2.7	188	None	Yes	DEIS Release
76	Mid Atlantic	N.A.	<60 e	979	Sale 59 - $1,131 Sale 49 - 180 Sale 40 - 2,130	Yes	--
75	No. Aleutian Shelf	605	3.4	68	None	Yes	--
72	C.Gulf of Mexico	N.A.	45 e	5,930	Sale 67 - $1,120 Sale 66 - 2,446 Sale A66- 3,312	Yes	--
78	So. Atlantic	N.A.	50 e	178	Sale 56 - $1,218 Sale 43 - 411	Yes	--
74	W. Gulf of Mexico	N.A.	35 e	3,386	Sale 67 - $1,120 Sale 66 - 2,446 Sale A66- 3,312	Yes	--

1/ No calculation has been done on the expected bonus per acre leased. DOI calculations of expected bonus are based on the estimated resources in the sale area.

e - estimate

BUREAU OF LAND MANAGEMENT

7. Question: Mr. Secretary, the Department's budget request for the Bureau of Land Management increases are recommended for Onshore and Offshore Minerals Management, Energy and Non-Energy Related Realty, and Fire Management. Decreased funding levels are requested for Forest and Range Management, Recreation Mangement, Wildlife Habitat Work, and Soil, Water, and Air Management. Do you think that such a budget reflects a balanced approach to resource management of the public lands?

Answer: The FY 1983 budget was developed based on national priorities for the various multiple-uses as influenced by a constrained budget. We believe that our budget does represent a balance between the use, conservation and protection of our various resources. Energy is admittedly a higher priority than it has been in the past and increases have been proposed in several energy areas. Similar increases have been proposed in our realty programs to provide access not only for energy uses but also other multiple-uses. Both the energy and realty programs are structured to respond to other multiple-use concerns as they are identified during our planning and environmental assessment processes.

LAND AND WATER CONSERVATION FUND

8. Question: Why does the Department continue to support amending the Land and Water Conservation Fund Act to permit the use of these funds for rehabilitation and maintenance? Can't you perform the same type of work with regular appropriations? You really do not need such an amendment to implement your park rehabilitation program, do you?

Answer: The Department is convinced that the use of Land and Water Conservation Fund monies for improving conditions in the National Park System is an appropriate and realistic alternative to continued acquisition of recently authorized park lands. No less than fifty new parks have been added to the Park System since 1976. This considerable addition, representing fully one-sixth of the total number of parks administered by the Service, has contributed to an acquisition backlog of over $800 million. This administration firmly believes we must first take care of what parks we now have before increasing the administrative size of the System. The Department is, however, not proposing a total "no-growth" posture. Acquisition will continue in fiscal 1983 for nine authorized areas of the System. Funds are also being requested to cover deficiencies and relocation expenses in condemnation cases, emergency acquisitions and land exchanges.

OCS RECEIPTS

9. Question: Mr. Secretary, the Department's FY 1983 budget estimates that oil and gas receipts from the Outer Continental Shelf will total $18 billion next year. This amount is more than twice the level expected to be collected in FY 1982. Is this a realistic figure? What are the assumptions under-lying this estimate? What indications do you have from the industry that they have the resources and the inclination sufficient to undertake such an ambitious program?

Answer: The estimate of receipts for FY 1983 from the OCS leasing program of $18 billion is realistic. The receipts will be derived from three sources: rents and bonuses, royalties, and payouts from the 8(g) escrow account. The rents and bonuses component of the receipts estimate is about $13.2 billion. That estimate is based on a proposed new leasing schedule, which is in the latter stages of approval, and on an October 1981 estimate of the amount of resources that might be found in the sale areas. Under the new schedule Interior will offer 28 billion barrels of resources in FY 1983, five times the amount that will be offered in FY 1982. The estimate of rents and bonuses for FY 1983 is therefore consistent with the size of the program being proposed for that year.

Furthermore, the estimate is based on conservative assumptions about the various risks and uncertainties that could affect the OCS leasing program, including:

- possible delays in holding individual sales of the leasing program,
- future oil and gas prices,
- additional costs oil companies may incur in obtaining funds to bid on the reserves being offered,
- difficulties in exploring for oil, possibilities that no oil will be found, and variations in the concentration of undiscovered reserves, and
- the possibility that Interior may reject some bids as too low.

The estimates of receipts from royalties in FY 1983 is about $3.3 billion. It is based on conservative assumptions about oil and gas prices and production.

The estimate of receipts for FY 1983 assumes $1.5 billion in payout from an existing section 8(g) escrow account containing funds received from OCS lease sales on tracts in which the States may be entitled to a share of the receipts. The estimates assume that 25% of the total amount being held in escrow will be paid out each year in fiscal years 1983 through 1986.

To summarize, total receipts from the OCS program from these three sources are estimated to be $18 billion Since industry paid almost $12 billion to the billion to the U.S. Treasury in FY 1981 it seems there is the capacity on the part of industry to undertake this task. Reports that we have seen indicate that industry is expanding its capabilities and can handle the increased pace of leasing. For example, 267 new offshore drilling rigs are now being constructed and scheduled for completion by the end of 1985 versus the 260 rigs currently operating in U.S. waters. U.S. shipyards are expanding their capacity -- the number of domestic firms building drilling rigs rose from 10 to 17 in the last five years. The production of tubular goods is way up and continues to expand. The number of drilling companies is increasing and the training of additional geologists, engineers, geophysicists as well as tool pushers and other roughnecks is expanding rapidly.

NATIONAL PARK SERVICE

10. Question: Mr. Secretary, in your statement you say that the Department has "instituted a near moratorium on adding new units to the park system until needed work in existing parks can be accomplished and previous acquisitions paid for." While I have no serious quarrel with the first condition, I am somewhat confounded by the second. How can we ever reduce the backlog of unauthorized but unacquired park lands if the Administration continues to oppose all but token land acquisition funding while at the same time seeking to drain off Land and Water Conservation Fund monies for rehabilitation and repair? If new federal park and recreation areas in this nation are dependent on eliminating the land acquisition backlog under the amounts you propose, then I think there is little chance of any new areas in the foreseeable future.

Answer: The Department has proposed a moratorium on the acquisition of new parkland from the Land and Water Conservation Fund in its fiscal 1982 budget. The Department believes a more appropriate use of these funds would be to improve conditions in existing heavily used parks throughout the National Park System. The acquisition of park land generates funding requirements for development and operations which is not consistent with this Administration's firm commitment to reduce Federal spending. The Department believes the use of these funds for facility improvement is a wise and appropriate use of the Land and Water Conservation Fund. Further, the acquisition of new parklands for authorized areas cannot be held in the same high priority as the correction of health and safety problems in parks that annually receive very high visitation.

The full fee acquisition program has greatly increased the need for additional operation and maintenance funding. Over the years, Federal agencies have not been able to secure operating funds sufficient to keep pace with their rapidly growing land base. The recent GAO report identified serious deficiencies in this regard for the National Park Service and the Forest Service.

The Department's position is that the Federal budgetary resources must be used to better manage those lands already under Federal jurisidiction rather than to continue the program of major new Federal acquisitions. To further this high priority goal to fruition, the Department is recommending a significantly reduced land acquisition program for fiscal 1983.

BLM WILDERNESS REVIEW - MINERAL SURVEYS

11. Question: Mr. Secretary, the budget proposes a reduction in the amount of funding available for mineral surveys on BLM wilderness study areas. The Budget Highlights booklet states that:

> "This cut is a result of a decision to conduct such surveys only on areas determined potentially suitable for recommendation as wilderness."

Sec. 603(a) of the Federal Land Policy and Management Act provides that no wilderness recommendation is to be made until a mineral survey by the U.S. Geological Survey and the Bureau of Mines has been conducted. Given these facts, are you not using the budget process to predetermine what wilderness areas the President will recommend to the Congress for inclusion in the Wilderness System?

Answer: FLPMA Sec. 603(a) states in part that "Provided, that prior to any recommendations for the designation of an area as wilderness the Secretary shall cause mineral surveys to be conducted by the Geological Survey and the Bureau of Mines. . . ." The budget process is not being used to predetermine what wilderness areas will be recommended to Congress for inclusion in the Wilderness System. The context of FLPMA is clearly that the mineral surveys should be conducted on those areas determined to be suitable for recommendations by the Secretary for designation as wilderness, not on all areas being studied. All areas that are found suitable for designation as wilderness will be surveyed for minerals prior to the wilderness recommendation to Congress. Almost all the mineral surveys that will be accomplished in FY 1983 will be on areas in the California Desert National Conservation Area that have already been found suitable for wilderness. It is our intent to continue to have mineral surveys conducted on suitable areas in synchronization with the Wilderness Study schedule and in line with available funding. If in subsequent years funding does not cover the mineral survey needs of potentially suitable areas, a supplemental or reprogramming request can be initiated. As a result we have no intention of letting the budget process predetermine what potential wilderness will be recommended.

FEES

12. Question: The President's budget anticipates significant increases in recreation, entrance, and user fees for areas administered by the National Park Service, the Bureau of Land Management, and the U.S. Fish and Wildlife Service. Can you tell us something about the nature of the legislation you plan to submit to affect some of these changes?

Answer: A variety of approaches are presently under consideration within the Administration. Final decisions on the form the legislation might take have not yet been made.

13. Question: Are you working with the Department of Agriculture in the preparation of a proposal to institute some type of general "Public Lands User Fee"?

Answer: The Department of Agriculture is involved in the drafting of the proposed legislation.

14. Question: When might we expect these legislative initiatives?

Answer: We do not have a schedule for submission of the legislation.

15. Question: I understand that the National Park Service will shortly announce significant increases in user fees for campgrounds, parking, etc. When will we have specific information on the units affected, the particular increases involved, etc.?

Answer: A listing of park units and increases follows:

1/27/82

User Fees

	1980-81	1982	DOLLAR INCREASE	PERCENT INCREASE
Campgrounds	$5,062,522	$ 8,524,675	$3,462,153	69
Other	879,320	1,746,357	867,037	96
TOTAL	$5,941,842	$10,271,032	$4,329,190	73

1. Parks with Fee Campgrounds	67
Parks not Qualifying under Fee Criteria	36
Total Parks with Campgrounds	103

2. CAMPGROUNDS

Fee Campgrounds	214
Non-Fee Campgrounds	224
Total Campgrounds	438

3. CAMPSITES

Fee Campsites	24,957
Campsites not Qualifying Under Fee Criteria	3,605
Total Campsites	28,562

4. Park with Other Fees	15

The 1982 projected increase of $4,329,190, is based on the percentage of increase by park using 1980-81 revenue figures, and at the same level of park use.

You will note that some parks have 2 types of user fees. Our records do not separate such fees and as a result, total user fees are listed under the activity which net the most dollars.

EXAMPLE
Mammoth Cave National Park has user fees for both cave tours and for camping. Since the majority of user fees collected are from cave tours, the entire user fee amount is listed under the "User Fee - Other" category, with reference made under the "User Fee - Campgrounds" section.

This separation of activity revenue will be made in the 1981 Annual Fee Report.

PARK AND CAMPGROUNDS	SITES	FEE 1980 & 1981	FEE 1982	PERCENT INCREASE	REVENUE 1980 & 1981	REVENUE PROJ. 1982
1. Acadia N.P.					205,994	308,991
Blackwoods	325	4.00	6.00	50		
Seawall	218	4.00	6.00	50		
(Seawall-walkin)		2.00	3.00	50		
adv. camping res.		1.00	1.00	0		
2. Amistad N.R.A.						
Various locations	70	0	0	0	0	0
3. Antietam N.B.						
Rohrbach (group)	4	0	0	0	0	0
4. Apostle Island N.L.						
Various locations	49	0	0	0	0	0
5. Arches N.P.					12,854	25,708
Devils Garden	53	2.00	4.00	100		
Group Camping		1.00	1.00	0		
		10.00	10.00	0		
6. Assateague Island N.S.					68,544	113,783
North Beach	86	3.00	5.00	66		
North Beach Group	5	5.00	6.00	20		
Bayside	40	3.00	5.00	66		
4 campgrounds	17	0	0	0		
7. Badlands N.M.					17,300	25,950
Cedar Pass	136	4.00	6.00	50		
		1.00	1.00			
Group Camping		10.00	10.00	0		
8. Bandelier N.M.					14,475	24,028
Juniper	93	3.00	5.00	66		
Ponderosa-group	4	.25	.50	100		
			5.00			
9. Big Bend N.P.					41,751	83,502
Chisos Mtn. Basin	58	2.00	4.00	100		
Rio Grande Village	99	2.00	4.00	100		
Castolon-S.E. Group		5.00	1.00	0		
			5.00			
Cottonwood	34	0	2.00	200		
10. Bighorn Canyon N.R.					1,552	2,302
Horseshoe Bend	125	2.00	3.00	50		

PARK AND CAMPGROUNDS	SITES	FEE 1980 & 1981	FEE 1982	PERCENT INCREASE	REVENUE 1980 & 1981	REVENUE PROJ. 1982
11.Biscayne N.P.						
Elliott Key	35	0	0	0	0	0
12.Black Canyon of the Gunnison N.M.					3,561	10,683
South Rim	102	1.00	3.00	200		
13.Blue Ridge Parkway					172,934	287,070
Crabtree Meadows	93	3.00	5.00	66		
Doughton Park	136	3.00	5.00	66		
Linville Falls	75	3.00	5.00	66		
Otter Creek	67	3.00	5.00	66		
Peaks of Otter	148	3.00	5.00	66		
Mt. Pisgah	140	3.00	5.00	66		
Julian Price	197	3.00	5.00	66		
Roanoke Mt.	105	3.00	5.00	66		
Rocky Know	109	3.00	5.00	66		
14.Booker T. Washington N.M.						
Group	4	0	0	0	0	0
15.Bryce Canyon N.P.					47,114	94,228
North	111	2.00	4.00	100		
Sunset	115	2.00	4.00	100		
Group		5.00	1.00 10.00	100		
16.Buffalo N.R.					33,776	42,220
Buffalo Point	118	3.00	3.00 5.00(elect.)	25		
Group			1.00 10.00	100		
17.Canyon De Chelly N.M.					0	0
Cottonwood	95	0	0	0		
18.Canyonlands N.P.					5,373	7,146
Squaw Flat	36	3.00	4.00	33		
Willow Flat	12	0	0	0		
Group		1.00 10.00	1.00 10.00	0 0		
19.Cape Hatteras N.S.					341,832	512,748
Cape Point	202	4.00	6.00	50		
Frisco	136	4.00	6.00	50		
Ocracoke	135	4.00	6.00	50		
Oregon Inlet	120	4.00	6.00	50		
Salvo	142	4.00	6.00	50		

PARK AND CAMPGROUNDS	SITES	1980 & 1981	1982	PERCENT INCREASE	1980 & 1981	PROJ. 1982
20.Cape Lookout N.S.					0	0
Primitive Camping	0	0	0	0		
21.Capitol Reef N.P.					17,018	25,527
Capitol Reef	53	2.00	3.00	50		
Cedar Mesa	5	0				
Group		.50 5.00	.50 5.00	0		
22.Catoctin Mountain Park					7,713	15,426
Owens Creek	51	2.00	4.00	100		
Poplar Grove		0	0	0		
23.Cedar Breaks N.M.					2,627	3,040
Point Supreme	30	2.00	3.00	100		
24.Chaco Canyon N.M.					0	0
Gallo Wash	35	0	0	0		
25.Channel Island N.P.					0	0
Anacapa Island		0	0	0		
San Barbara Island		0	0	0		
26.Chesapeake & Ohio Canal N.H.P.					0	0
5 Campgrounds	107	0	0	0		
27.Chickasaw N.R.A.					33,116	54,972
Buckhorn	177	3.00	5.00	66		
Cold Springs	63	3.00	5.00	66		
Guy Sandy	40	3.00	5.00	66		
The Point	52	3.00	5.00	66		
Rock Creek	106	3.00	5.00	66		
Central (Group)		.50 5.00	1.00 10.00	100		
28.Chiricahua N.M.					7,945	15,890
Bonita Canyon	30	2.00	4.00	100		
29.Colorado N.M.					5,704	11,408
Saddle Horn	81	2.00	4.00	100		
30.Coulee Dam N.R.A.					28,395	47,135
Evans	34	3.00	5.00	66		
Fort Spokane	67	3.00	5.00	66		
Kettle Falls	89	3.00	5.00	66		
Porcupine Bay	31	3.00	5.00	66		

PARK AND CAMPGROUNDS	SITES	FEE 1980 & 1981	1982	PERCENT INCREASE	REVENUE 1980 & 1981	PROJ. 1982
Spring Canyon	87	3.00	5.00	66		
16 Campgrounds	247					
31. Crater Lake N.P.					31,610	52,472
Lost Creek	12	0	0	0		
Mazama	200	3.00	5.00	66		
32. Craters of the Moon N.M.					5,508	11,016
Lava Flow	51	2.00	5.00	150		
33. Cumberland Gap N.H.P.					5,975	11,950
Chadwell Gap	4	2.00	4.00	100		
Gibson Gap	3	2.00	4.00	100		
Martin's Fork	6	2.00	4.00	100		
White Rocks		0	0	0	0	0
Wilderness Road	160	2.00	4.00	100		
34. Cumberland Island N.S.					0	0
Backcountry		0	0	0		
Sea Camp	16	0	0	0		
35. Curecanti N.R.A.					32,955	59,319
Camarron	10	0	0	0		
Elk Creek	175	3.00	5.00	66		
Lake Fork	150	2.00	5.00	150		
Stevens Creek	75	1.00	4.00	300		
Simeron			5.00			
Group			.50			
36. Death Valley N.M.					143,801	417,022
Emigrant	10	0	0	0		
Furnace Creek	200	1.00	3.00	200		
Mahogany Flat	10	0	0	0		
Mesquite Springs	64	2.00	4.00	100		
Stove Pipe Wells	200	1.00	3.00	200		
Sunset	1000	1.00	3.00	200		
Texas Springs	100	1.00	3.00	200		
Thorndike	8	0				
Wildrose	38	0				
Group		.25	.50	100		
37. Denali N.P.					48,968	73,452
Igloo	7	0	0	0		
Morino	10	0	0	0		
Riley Creek	102	4.00	6.00	50		
Santuary	7	0	0	0		
Savage	24	4.00	6.00	50		
Teklanika	50	2.00	4.00	100		
Wonder Lake	20	4.00	6.00	50		

PARK AND CAMPGROUNDS	SITES	FEE 1980 & 1981	FEE 1982	PERCENT INCREASE	REVENUE 1980 & 1981	REVENUE PROJ. 1982
38.Devils Postpile N.M.						
Devils Postpile	23	3.00	5.00	66	Listed under Sequoia	
39.Devils Tower N.M.					15,955	23,932
Delle Fourche River	51	4.00	6.00	50		
40.Dinosaur N.M.					11,859	23,718
5 Campgrounds	62	0	0	0		
Green River	99	2.00	4.00	100		
Split Mountain	35	2.00	4.00	100		
41.El Morro N.M.					0	0
El Morro	9	0	0	0		
42.Everglades N.P.					105,112	174,485
Backcountry	29	0	0	0		
Flamingo	237	3.00	5.00	66		
	60	2.00	4.00	100		
Long Pine	107	3.00	5.00	66		
43.Fire Island N.S.					0	0
Group Camp		0	0	0		
Watch Hill	20	0	0	0		
44.Fort Jefferson N.M.					0	0
Camp	8	0	0	0		
45.Gila Cliff Dwellings N.M.					0	0
Lower Scorpion	7	0	0	0		
Upper Scorpion	13	0	0	0		
46.Glacier Bay N.M.					0	0
Wilderness	25	0	0	0		
47.Glacier N.P.					130,134	195,201
Apgar	196	3.00	5.00	66		
Avalanche	87	3.00	5.00	66		
Bowman Lake	48	2.00	3.00	50		

PARK AND CAMPGROUNDS	SITES	FEE 1980 & 1981	FEE 1982	PERCENT INCREASE	REVENUE 1980 & 1981	REVENUE PROJ. 1982
Cut Bank	19	2.00	3.00	50		
Fish Creek	180	3.00	5.00	66		
Kintla Lake	19	2.00	3.00	50		
Logging Creek	8	2.00	3.00	50		
Many Glacier	117	3.00	5.00	66		
Rising Sun	82	3.00	5.00	66		
River	7	2.00	3.00	50		
Sprague Creek	25	3.00	5.00	66		
St. Mary Lake	156	3.00	5.00	66		
Two Medicine	99	3.00	5.00	66		
Backcountry Camps	70		0	0		
48.Glen Canyon N.R.A.					64,925	162,312
Bullfrog	86	2.00	5.00	150		
Halls Crossing	65	0	0	0		
Hite	6	0	0	0		
Lees Ferry	56	2.00	5.00	150		
Wahweap	178	2.00	5.00	150		
Group			1.00 10.00	0		
49.Golden Gate N.R.A.					0	0
4 Campgrounds	14	0	0	0		
50.Grand Canyon N.P.					185,587	308,074
North Rim	82	3.00	5.00	66		
Desert View	50	2.00	4.00	100		
Mather		3.00	5.00	66		
Hike-In	155	0	0	0		
51.Grand Portage N.M.					0	0
Fort Charlotte	2	0	0	0		
52.Grand Teton N.P.					209,504	314,256
Group		.50	1.00	100		
Colter	350	4.00	6.00	50		
Gros Ventre	360	4.00	6.00	50		
Jenny Lake	49	4.00	6.00	50		
Lizard Creek	60	4.00	6.00	50		
Signal Mountain	86	4.00	6.00	50		

PARK AND CAMPGROUNDS	SITES	FEE 1980 & 1981	FEE 1982	PERCENT INCREASE	REVENUE 1980 & 1981	REVENUE PROJ. 1982
53.Great Sand Dunes N.M.					26,196	43,485
Dunes	20	0	0	0		
Pinyon Flat	88	3.00	5.00	66		
Group		.25	.50	100		
		5.00	10.00	100		
54.Great Smoky Mts. N.P.					290,067	435,100
Abrams	16	0	0			
Balsams	46	4.00	6.00	50		
Big Creek	9	0	0	0		
Cades Cove	161	4.00	6.00	50		
Cataloochee	27	0	0	0		
Cosey	175	4.00	6.00	50		
Deep Creek	119	4.00	6.00	50		
Elkmont	220	4.00	6.00	50		
Look Rock	92	4.00	6.00	50		
Smokemont	150	4.00	6.00	50		
Trail Shelters	14	0	0	0		
Misc. Camps	95	0	0	0		
55.Greenbelt Park						
Greenbelt Park	174	2.00	4.50	125	Under Catoctin	
56.Guadalupe Mt. N.P.					0	0
Pine Spring Canyon	20	0	0	0		
57.Gulf Islands N.S.					112,487	168,730
Fort Pickens	165	4.00	6.00	50		
Davis Bayou	51	3.00	6.00	100		
(plus $1 for electric)						
58.Haleakala N.P.					9,825	19,650
4 Campgrounds	25	0	0	0		
Cabin rental		1.00c	2.00c			
		2.00a	4.00a	100		
59.Hawaii Volcanoes N.P.					0	0
3 Campgrounds	25	0	0	0		
60.Hot Springs N.P.					18,347	30,456
Gulpha Gorge	47	3.00	5.00	66		
61.Hovenweep N.M.					0	0
Square Tower Ruin	31	0	0	0		
62.Isle Royale N.P.					0	0
31 Campgrounds	202	0	0	0		

PARK AND CAMPGROUNDS	SITES	FEE		PERCENT INCREASE	REVENUE	
		1980 & 1981	1982		1980 & 1981	PROJ. 1982
63. John D. Rockfeller Jr. Memorial Parkway						
Snake River	24	4.00	6.00	50	Under Grand Teton	
Group		.50	.50			
64. John Day Fossil Beds N.M.					0	0
Painted Hills	10	0	0	0		
65. Joshua Tree N.M.					13,332	26,664
7 Campgrounds	379	0	0	0		
Black Rock Canyon	100	2.00	4.00	100		
Cottonwood Spring	62	2.00	4.00	100		
66. Katmai N.P.					0	0
Brooks River	29	0	0	0		
67. Kings Canyon N.P.					Listed under Sequoia	
Azalea	108	2.00	4.00	100		
Crystal Springs	57	2.00	4,00	100		
Sunset	213	2.00	4.00	100		
Canyon View	67	2.00	4.00	100		
Moraine	124	2.00	4.00	100		
Sentinel	86	2.00	4.00	100		
Sheep Creek	113	2.00	4.00	100		
68. Klondike Gold Rush N.H.P.					0	0
Klondike	22	0	0	0		
69. Lake Chelan N.R.A.					0	0
5 Campgrounds	35	0	0	0		
70. Lake Mead N.R.A.					169,861	339,722
Boulder Beach	154	2.00	4.00	100		
Caliville Bay	80	2.00	4.00	100		
Cottonwood Cove	149	2.00	4.00	100		
Echo Bay	166	2.00	4.00	100		
Hemenway	184	2.00	4.00	100		
Katherine	173	2.00	4.00	100		
Las Vegas Wash	89	2.00	4.00	100		
Overton Landing	40	0	0	0		
Temple Bar	153	2.00	4.00	100		

		FEE			REVENUE	
PARK AND CAMPGROUNDS	SITES	1980 & 1981	1982	PERCENT INCREASE	1980 & 1981	PROJ. 1982
71.Lake Meredith N.R.A.					0	0
6 Campgrounds	134	0	0	0		
72.Lassen Volcanic N.P.					33,018	66,036
Butte Lake	98	2.00	4.00	100		
Crags	45	1.00	2.00	100		
Juniper Lake	18	0	0	0		
Lost Creek	9	1.00	2.00	100		
Manzanita Lake	179	2.00	4.00	100		
Southwest	21	1.00	2.00	100		
Summit Lake						
North	46	2.00	4.00	100		
South	48	1.00	3.00	200		
Warner Valley	15	1.00	2.00	100		
Group		5.00	8.00	60		
73.Lava Beds N.M.					4,270	7,088
Indian Well	45	3.00	5.00	66		
74.Mammoth Cave N.P.					Listed under cave tours	
Headquarters	111	3.00	5.00	66		
Houchin's Ferry	12	0	0	0		
Onyx Meadows-Group	1	0	0	0		
75.Mesa Verde N.P.					55,873	111,746
Morefield Canyon	494	2.00	4.00	100		
Group		.50	.50	0		
76.Mount Rainier N.P.					44,171	73,323
Cougar Rock	200	3.00	5.00	66		
Ipsut Creek	32	1.00	3.00	200		
Longmire	110	3.00	5.00	66		
Ohanapecosh	232	3.00	5.00	66		
Sunshine Point	20	1.00	3.00	200		
White River	117	3.00	5.00	66		
77.Natchez Trace Parkway					0	0
3 Campgrounds	72	0	0	0		
78.Natural Bridges N.M.					0	0
Natural Bridges	13	0	0	0		
79.Navajo N.M.					0	0
Tonalea	30	0	0	0		

PARK AND CAMPGROUNDS	SITES	FEE 1980 & 1981	FEE 1982	PERCENT INCREASE	REVENUE 1980 & 1981	REVENUE PROJ. 1982
80.North Cascades N.P.					0	0
7 Campgrounds	18	0	0	0		
81.Olympic N.P.					88,177	146,373
Altaire	29	3.00	5.00	66		
Elwha	41	3.00	5.00	66		
Fairholm	87	3.00	5.00	66		
Heart O'the Hills	105	3.00	5.00	66		
Hoh	95	3.00	5.00	66		
Kalaloch	179	3.00	5.00	66		
Mora	91	3.00	5.00	66		
Soleduck	84	3.00	5.00	66		
Staircase	63	3.00	5.00	66		
8 Campgrounds	220	0	0	0		
82.Organ Pipe Cactus N.M.					27,995	55,990
Headquarters	208	2.00	4.00	100		
Group		.50	1.00	50		
		5.00	5.00			
83.Ozark N.S.R.					78,600	105,538
Akers	81	3.00	4.00	33		
Alley Spring	220	3.00	4.00	33		
Big Spring	205	3.00	4.00	33		
Owls Bend	26	3.00	4.00	33		
Round Spring	60	3.00	4.00	33		
Group		.50	.75	50		
			11.00			
5 Campgrounds	93	0	0	0		
84.Padre Island N.S.					14,759	29,518
Malaquite Beach	102	2.00	4.00	100		
85.Pictured Rocks N.L.					0	0
3 Campgrounds	39	0	0	0		
86.Pinnacles N.M.					4,253	8,506
Chaparral	25	2.00	4.00	100		
87.Point Reyes N.S.					0	0
4 Campgrounds	42	0	0	0		
88.Prince William Forest Park					8,332	16,664
Oak Ridge	120	2.00	4.00	100		
Chopawamsic	17	0	0	0		
Turkey Run Ridge	12	0	0	0		

PARK AND CAMPGROUNDS	SITES	FEE 1980 & 1981	FEE 1982	PERCENT INCREASE	REVENUE 1980 & 1981	REVENUE PROJ. 1982
89.Rocky Mountain N.P.					221,298	331,947
Aspenglen	75	4.00	6.00	50		
Glacier Basin	243	4.00	6.00	50		
Longs Peak	30	4.00	6.00	50		
Moraine Park	260	4.00	6.00	50		
Timber Creek	100	4.00	6.00	50		
Trail Camps	261	0	0			
Group		5.00	1.00 10.00	100		
90.Ross Lake N.R.A.					28,924	48,013
Colonial Creek	164	3.00	5.00	66		
Goodell Creek	28	1.00	3.00	200		
18 Campgrounds	204	0	0	0		
91.St. Croix N.S.R.					0	0
2 Campgrounds	23	0	0	0		
92.Sequoia N.P.					220,846	441,692
Group		.25	.50	100		
Atwell Mill	23	0	0	0		
Buckeye Flat	29	2.00	4.00	100		
Cold Springs	29	0	0	0		
Dorst	238	2.00	4.00	100		
Lodgepole	261	2.00	4.00	100		
Potwisha	44	2.00	4.00	100		
South Fork	12	0	0	0		
93.Shenandoah N.P.					200,090	332,149
Mathews Arm	186	3.00	5.00	66		
Big Meadows	253	3.00	5.00	66		
Lewis Mountain	32	3.00	5.00	66		
Loft Mountain	231	3.00	5.00	66		
Dunod Youth Group	7	5.00	10.00	100		
94.Sleeping Bear Dunes N.L.					36,109	72,218
D.H. Day	100	2.00	4.00	100		
Platte River	150	2.00	4.00	100		
South Mountain Is.	80	0	0	0		
95.Sunset Crater N.M.					16,281	21,653
Bonito-U.S.F.S.	44	3.00	4.00	33		

		FEE			REVENUE	
PARK AND CAMPGROUNDS	SITES	1980 & 1981	1982	PERCENT INCREASE	1980 & 1981	PROJ. 1982
96.Theodore Roosevelt N.P.					10,841	21,682
Cottonwood	108	2.00	4.00	100		
Halliday Wells	5	0	0			
Squaw Creek	50	2.00	4.00	100		
Group		.25	1.00	300		
97.Virgin Islands N.P.					0	0
Cinnamon Bay	92	0	0	0		
98.Voyageurs N.P.					0	0
3 Campgrounds	110	0	0	0		
99.Whiskeytown N.R.A.					23,797	39,503
Brandy Creek	37	0	0	0		
Dry Creek Group	1	0	0	0		
Oak Bottom	155	3.00	5.00	66		
100.Wind Cave N.P.					Included under cave tours	
Elk Mountain	100	4.00	6.00			
Group			1.00			
			10.00			
101.Yellowstone N.P.					435,351	696,561
Bridge Bay	438	4.00	6.00	50		
Canyon	280	4.00	6.00	50		
Fishing Bridge	308	4.00	6.00	50		
Grant Village	433	4.00	6.00	50		
Indian Creek	78	3.00	5.00	66		
Lewis Lake	100	3.00	5.00	66		
Madison	292	4.00	6.00	50		
Mammoth	87	4.00	6.00	50		
Norris	116	4.00	6.00	50		
Pebble Creek	36	3.00	5.00	66		
Slough Creek	30	3.00	5.00	66		
Tower Fall	37	3.00	5.00	66		
Group		.50	1.00			
		5.00	10.00	100		
102.Yosemite N.P.					711,777	1,103,254
Valley:						
Sunnyside	38	2.00	5.00	150		
Lower River	99	4.00	6.00	50		
Youth Group	14	6.00	6.00	0		
Upper Pines	226	4.00	6.00	50		
North Pines	84	4.00	6.00	50		
Lower Pines	165	4.00	6.00	50		
Upper River	110	4.00	6.00	50		

PARK AND CAMPGROUNDS	SITES	FEE 1980 & 1981	FEE 1982	PERCENT INCREASE	REVENUE 1980 & 1981	REVENUE PROJ. 1982
Muir Tree	25	0	0	0		
Bridalveil Creek	110	3.00	5.00	66		
Crane Flat	165	3.00	5.00	66		
Hodgeon Meadow	110	3.00	5.00	66		
Porcupine Flat	75	1.00	2.00	100		
Smoky Jack	50	1.00	2.00	100		
Tamarack Flat	80	1.00	2.00	100		
Tenaya Lake	50	3.00	5.00	66		
Tuolumne Meadows	371	2.00	4.00	100		
Wawona	99	3.00	5.00	66		
White Wolf	86	3.00	5.00	66		
Yosemite Creek	100	1.00	2.00	100		
103.Zion N.P.					96,224	192,448
Lava Point	4	0	0	0		
South	144	2.00	4.00	100		
Watchman	229	2.00	4.00	100		
Group		.50	.50			
		5.00	5.00	0		
103 438 TOTALS	28,562			Average 69	5,062,522	8,524,675

FEES - OTHER

PARK AND CAMPGROUNDS	FEE 1980 & 1981	FEE 1982	PERCENT INCREASE	REVENUE 1980 & 1981	REVENUE PROJ. 1982
1.Cumberland Is. N.S.				47,554	63,246
Ferry	2.00a	3.00a	33		
	1.00c	1.00c	0		
2.Death Valley N.M.			-		
Scotty's Castle	1.00a	4.00		Included under camping	
	.50c	2.00	300		
3.El Morro N.M.					
Monument Trails	1.00veh.	2.00veh.	100	4,349	8,698
	.50pp	.50pp			
4.Gateway N.R.A.				6,450	12,900
Bathhouse	.25	.50	100		
5.Indiana Dunes N.L.				49,333	98,666
Specialized Site	1.00	2.00	100		
6.Jewel Cave N.M.					
Scenic 1/2 mile	1.00a	2.00	100		
	.50c	1.00	100	42,748	85,496
Historic 1/2 mile	1.00a	2.00			
	.50c	1.00			
Spelunking	2.00	4.00			
7.Lehman Caves N.M.					
Tour	.50	1.00	100	9,895	19,790
8.Lincoln Home				16,470	32,940
Parking	.50	1.00	100		
	1.00				
9.Mammoth Cave N.P.				533,853	1,067,706
Tours				includes camping	
Frozen Niagara	1.50	3.00	100		
Historic	1.50	3.00	100		
Half-Day	2.50	5.00	100		
Handicapped	1.00	2.00	100		
Lantern	2.00	4.00	100		
Wild Cave	3.50	5.00	42		
Great Onyx	1.50	3.00	100		
Echo River	2.00	4.00	100		

FEES - OTHER

PARK AND CAMPGROUNDS	FEE 1980 & 1981	FEE 1982	PERCENT INCREASE	REVENUE 1980 & 1981	REVENUE PROJ. 1982
10.Perry's Victory N.M.				21,454	42,908
Elevator	.25	.50	100		
11.San Juan N.H.S.				4,410	8,820
El Morro-Guide	.50	1.00	100		
San Cristobal	.50	1.00	100		
12.Sequoia N.P.					
Crystal Cave	.50	1.00	100	Listed under camping	
13.Statue of Liberty N.M.				39,159	97,897
Elevator	.10	.25	150		
14.Timpanogos Cave N.M.				17,523	35,046
Tour	.50	1.00	100		
15.Wind Cave N.P.				86,122	172,244
Cave Tours				includes camping	
Reg	1.00a	2.00a	100		
	.50c	1.00c	100		
Long and History	1.50a	3.00a	100		
	.75c	1.00c	33		
Spelunking	2.00	4.00	100		
15 TOTALS			96	879,320	1,746,357

16. Question: Assuming the Congress gives you the authority to raise entrance fees at units of the National Park System, how much additional revenue would contemplate raising in this manner?

Answer: The National Park Service is studying the present entrance fee structure to determine appropriate levels for new/increased entrance fees. The amount of increased revenues is not now known.

ONSHORE OIL AND GAS LEASING

17. Question: In your statement, you state you intend to focus on reducing the backlog of leasing applications in the onshore oil and gas program in 1983.
The deadline for issuing leases in wilderness areas in December 31, 1983. Do you intend to give priority to lease applications for wilderness areas in the first quarter of FY 1983, in order to process these applications before the wilderness leasing deadline of December 31, 1983.

Answer: There are no plans to issue oil and gas leases in any wilderness areas. In fact we have submitted a legislative proposal to close wilderness areas and wilderness study areas in the lower 48 states to any commercial development which involves surface occupancy except in a situation of national emergency.

OFFICE OF SURFACE MINING

18. Question: Do you expect to ask for any changes in the 1977 Surface Mining Control and Reclamation Act?

Answer: OSM does not at this time anticipate asking for any changes to the law. Current regulation reform efforts are expected to clarify and resolve any issue areas which may have been perceived as being problems with the implementation of the law.

OSM and the Department are, however, considering the merits of a possible shift to the States of reponsibility for collection of Abandoned Mine Land Reclamation fees. This issue is in the preliminary study stage and no position has been developed. A future request for legislation is possible. At the same time, OSM and the Department are also considering alternatives for the allocation of the 50 percent discretionary portion of the reclamation fund to the States. Such an allocation is permissible under the Surface Mining Act without new legislation as long as OSM continues to collect the reclamation fees. Before implementing any discretionary funds allocation system OSM will coordinate its plans with the appropriate Congressional committees.

19. Question: OSM did not meet its announced schedule for approving State programs last year. Yet you state that you expect that all but 3 coal producing States will have assumed primacy for regulating surface mining by this October 1. Consequently, your budget request includes significant decreases in Federal regulation funds and particularly in funds for inspection and enforcement. On what basis are you assuming that nearly all States will have primacy by the end of this year?

Answer: All eight States that did not receive primacy after the previous Secretary's initial decision and who were then enjoined by State courts from resubmitting a program for a one year period, have now resubmitted their programs for review. One State, Virginia, has already achieved primacy (12/15/81). Programs from the other seven (Alabama, Illinois, Indiana, Kentucky, Ohio, Pennsylvania, and Tennessee) are being reviewed and a decision by the Secretary is expected within the next few months. Alaska is expected to submit a program by the end of Fiscal Year 1982.

20. Question: Even if you meet your schedule for approving State programs, will this greatly reduced inspection and enforcement budget be adequate to ensure that the requirements of the 1977 legislation are met?

Answer: We fully intend to meet the Act's mandate for States to be the primary authority after their plans are approved. This includes executing cooperative agreements in States with Federal lands. We believe that our request has included adequate funding to conduct inspections based on our statistical sampling methodology for evaluation of States' regulatory programs. This will provide for one Federal inspection for each 69 State inspections and provide a 95% accurate sampling of State performance.

MINERALS HEALTH AND SAFETY TECHNOLOGY

21. Question: You plan to reduce the Bureau of Mines minerals health and safety technology program by $8.2 million. What projects will not be done?

Answer: Projects to be terminated, deferred, or delayed under the $8.2 million reduction for minerals health and safety technology program include:

- Radiation Hazards. Development of a passive nuclear track dosimeter for measuring the exposure of uranium miners to radon daughters will be terminated. Final development and evaluation will be terminated on the new air cleaning system for radon daughter control. Preliminary work to quantify sources of radon gas in uranium mines will be eliminated.

- Noise Control. A project to determine levels of whole body vibration to which miners are exposed will be terminated. Work to control noise on load-haul-dump machines will be terminated. Projects to control noise on longwalls, continuous mining machines, and hard rock stoper drills will be reduced.

- Industrial Hygiene. The current effort to investigate the toxic emissions from new materials being introduced in underground mines will be phased out. Diesel engine research to produce hardware to control harmful exhaust emissions will be decreased. Demonstrations of prototype diesel engine exhaust controls and control methods will be reduced in scope.

- Ventilation. Development of techniques to make use of the unused high pressure water supply in deep mines to provide auxiliary power for underground operations will be reduced. Investigations of novel ventilation problems associated with mines having large, cross-sectional airways like salt, limestone, and oil shale will be deferred.

- Fire and Explosion. Facilities maintained at the Factory Mutual fire test gallery would be discontinued. Fire prevention and suppression research will be reduced in scope. Research related to fire detection, instrumentation, and alarm systems will be reduced.

- Methane Control. Basic research directed to attenuate the methane hazard in domal salt mines will be reduced. Demonstrations that prove the technology to drain methane from gassy and deep coal mines will be reduced. Applied research in oil shale and salt mines will be eliminated.

- Post Disaster. The continued development of a lightweight, belt worn self-contained oxygen self-rescuer will be decreased. Efforts to improve rescue team breathing apparatus for low seam coal mines will be reduced in scope. The trapped miner location research will be decreased.

- Explosives. Blasting hazard reduction research in the large open pit mines will be reduced, specifically the research dealing with work procedures. Research will be substantially reduced in scope in oil shale mining.

- Systems Engineering. The development and renovation of facilities to conduct health and safety research and to test and demonstrate new procedures and devices will be reduced in scope.

- Ground Control. Government funding for demonstration of Bureau developed technology and equipment will be reduced. Efforts to improve current ground support equipment will be reduced. Some development and demonstration of equipment to protect miners installing roof support at the face will be eliminated or delayed.

- Industrial Hazards. Some efforts to solve safety problems in electrical equipment and cables will be terminated. Projects to design improvements in haulage and materials handling needed to lower the number of accidents will be reduced in scope or delayed. Efforts to solve the glare problem in low seams will be reduced in scope. Government funding for demonstrations of Bureau developed technology and equipment will be reduced. Cost/benefit analysis of improved mine safety equipment will be eliminated.

22. Question: What are the "high risk areas with long-term payoffs" that Mines Research will be emphasizing?

Answer: Emphasis will be placed on the following "high risk areas with long-term payoffs":

- Development and Evaluation of Longwall Dust Control Technology. This is a group of projects to develop technology for control of respirable dust on longwall coal faces. Methods under development include improved coal cutting methods, water powered dust collectors, and improved ventilation and water spray systems. Since coal production on longwalls is hampered by the need to limit dust, solution of this problems will have high pay-off by improving production as well as the long-term prevention of black lung disease.

  Development of Wire Rope Retirement Criteria. This effort to develop criteria is comprised of the following three distinctive components: (1) development of a mathematical model to predict the remaining strength in wire rope, (2) laboratory testing of wire rope to determine the effects of fatigue, stress loading, corrosion, and other environmental factors on wire rope, and (3) to take actual non-destructive measurements of new and used rope and analyze the data in terms of the rope condition and the two previously mentioned studies to develop a scientifically based rope retirement criteria.

- Basic Research on Initiation and Propagation of Detonation of Explosives. These are studies of fundamental factors and processes in the initiation and development of detonation process for explosive materials. Efforts are directed at understanding the explosives process and establishing a correlation of test results and explosives theory. This researcch is designed to improve the safety and performance of explosives by formulating explosive criteria that reflect the explosive characteristics, explosive states stimulation mechanism and reaction modes of mining explosives.

- Prediction and Control of Rock Bursts and Failures in Mines. This effort has three objectives: (1) to establish criteria and procedures basic to the problems of determining mine structure stability and how structural instabilities contribute to mine failures, (2) to develop effective and reliable methods of predicting rock bursts and controlling burst prone mine stopes; and, (3) to apply these methods to a mine with burst prone stopes. This research will aim to establish criteria and procedures basic to the problem of determining mine structure stability and how structural instabilities contribute to mine failures.

- Permissible Explosives Evaluation and Research. This work concerns research on fundamental explosion processes. It includes the testing of new permissible explosives, blasting agents and stemming devices and the monitoring of field samples (off-the-shelf items) for permissibility. It involves evaluation and development of improved procedures relevant to both coal and metal/nonmetal mine blasting. The Bureau's unique capability to assess problems associated with rapidly changing explosives technology and to develop solutions for safe and effective use of these explosives offers long term payoff for many industries.

- Solid Suppressants and Active Suppression Devices. In this work, explosion suppression systems composed of an explosion detection device, a suppressant delivery system, and a powder explosion suppressant are tested under simulated coal mine explosion conditions. These tests are conducted to measure detector reliability, delivery system effectiveness, and extinguishant efficiency under varying mining conditions, gas/dust mixture conditions, and delay times. Success of this work would open up a whole new era in underground mining wherein area work places, machinery, and men could be protected from catastrophic explosions that impede production and cause loss of life. These benefits would be substantial and long enduring.

- Feasibility of Remotely Measuring Methane. In a high-risk, high-payoff project, Raman light scattering is a particular type of molecular light scattering which allows identification of the scattering molecules by characteristics of the scattered light. Within this effort, the critical factors which determine the feasibility of building a device based on Raman scattering are being pursued. These factors include (1) a suitable light source, (2) the molecular Raman scattering characteristics, (3) a sufficiently sensitive detection system, and (4) potential interfering phenomena.

OIL AND GAS ROYALTY MANAGEMENT

23. Question: The Department's news release on the 1983 Budget states that an increase in spending for the onshore oil and gas lease regulation program will be offset by a decrease in the coal program, "which will place more reliance on data obtained through industry exploration licenses." Does that mean that more money will be spent on oil and gas royalty management, and that this increase will be offset by decreases in the amount of money spent on coal royalty management?

Answer: The proposed Fiscal Year 1983 decrease in the Minerals Management Service (MMS) Coal program results from a planned change in procedures which will substantially reduce government drilling operations. This reduction will have no impact on the amount of money spent on royalty management.

MINERAL INSTITUTES

24. Question: The Department's new release on the 1983 budget states that no fiscal year 1983 funding is proposed for the Mineral Institutes "because other sources of public and private support are expected to be available to the Mineral Institutes to help meet their program objectives." Specifically, what other sources of public support do you realistically expect?

Answer: Pursuant to Sec. 301(a) of P.L. 95-87, Mineral Institutes were established only where a school of mines or division or department of mining or minerals extraction had been in existence for at least two years with at least four full-time permanent faculty members. In fact, most of the institutions had been in existence much longer and all were funded by state financing prior to the Mineral Institute program. During the period of Federal financing for Mineral Institutes, state matching funds were required for Section 301(a) support. Moreover, several of the Mineral Institutes are located in prestigious colleges with multimillion-dollar state funding. In addition to state funding, other Federal programs have in the past and can be expected in the future to finance projects at qualified Mineral Institutes. For example, in Fiscal Year 1981, at school or colleges of mineral science and technology having Mineral Institutes, the Bureau of Mines financed additional mineral research involving $4,564,327 and the National Science Foundation $1,710,551. Consequently, there is every reason to believe that some significant levels of state funding plus some Federal funding will continue in Fiscal Year 1983 and beyond.

PROPOSED FISCAL YEAR 1983 BUDGET REQUEST

WEDNESDAY, FEBRUARY 10, 1982

U.S. SENATE,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
Washington, D.C.

The committee met, pursuant to notice, at 10:05 a.m., in room 3110, Dirksen Office Building, Hon. James A. McClure, chairman, presiding.

Present: Senators McClure, Warner, Murkowski, Nickles, and Melcher.

Also present: Gary Ellsworth, counsel; Richard D. Grundy, professional staff member; and D. Michael Harvey, chief counsel for the minority.

OPENING STATEMENT OF HON. JAMES A. McCLURE, A U.S. SENATOR FROM THE STATE OF IDAHO

The CHAIRMAN. The committee will come to order, please. Yesterday the committee began budget oversight hearings on various programs within its jurisdiction with testimony from Secretary Watt. Today's hearing will focus on the programs of the U.S. Forest Service and the Synthetic Fuels Corporation. On February 23 we will receive testimony from the Secretary of Energy, James Edwards.

During these hearings the committee will be evaluating various fiscal year 1983 proposals by President Reagan in preparation of the committee's March 15 report to the Senate Budget Committee.

Our first witness will be Doug MacCleery, Deputy Assistant Secretary for Natural Resources and Environment, the Department of Agriculture, on behalf of the Forest Service programs of the Department of Agriculture.

Our second witness will be Chairman Edward Noble on behalf of the U.S. Synthetic Fuels Corporation.

Yesterday the Synfuels Corporation was declared operational by President Reagan 4 months after Senate confirmation of the initial Board of Directors; more than 18 months have transpired since enactment of the Energy Security Act. Due to various events, including a national election, only recently has the Corporation begun to assume the role as envisioned by the Congress.

When the Synthetic Fuels Corporation was created, our goal was to demonstrate at the earliest practicable time the practicality of commercial production of synthetic fuels in the United States. This is still our national objective, but we have lost valuable time in this effort to increase our national energy security.

At the same time, it is no secret that there are and will be congressional pressures to dissolve the Corporation, rescind remaining funding authority, and abandon this unique cooperative effort by the Federal Government and industry to provide financial incentives for the development of synthetic fuels.

As a result, the issue before us now is what the Synthetic Fuels Corporation is doing to assure those statutory goals are achieved in their full scope and at the earliest practicable time.

Consequently, the committee today must have answers to the following questions.

What is the awards strategy being pursued by the Board of Directors, including when and on what basis financial awards will be made?

What is the approach being adopted by the Board of Directors to the achievement of the statutory goal of diversity as well as production?

How successful has the Corporation been in avoiding unauthorized activities, for example, Energy Mobilization Board type activities. Reportedly there is an agreement between the Corporation and the Environmental Protection Agency providing for the detail of EPA employees to the Corporation. However, there is a statutory requirement that the EPA, Department of Energy, and other Federal agencies deal with the Corporation as if it were a private corporation. Does detail of EPA employees to the Corporation call into question whether EPA as a regulatory agency will be provided access to what otherwise would be considered proprietary information?

There are reports that consideration is being given to establishment of an advisory committee to the Board of Directors with a directive to examine the need for the Corporation and the appropriateness of its statutory goals. I would like to know the truth in that regard. If such a proposal is being considered, it would call into question the commitment of the Board of Directors to proceed expeditiously to fulfill its statutory mandate.

Finally, is the Corporation contemplating a contract negotiation strategy that will insure sufficient commitment by the sponsors of synthetic fuels projects to assure completion of the projects selected by the Board to receive financial assistance?

Our witness this morning on behalf of the Corporation is Edward E. Noble, Chairman of the Board, U.S. Synthetic Fuels Corporation, who is accompanied by Victor A. Schroeder, President, and Dwight Ink, Vice President for Administration.

[The Executive order dated February 9, 1982, follows:]

THE WHITE HOUSE

Office of the Press Secretary

For Immediate Release February 9, 1982

EXECUTIVE ORDER

SYNTHETIC FUELS

By the authority vested in me as President by Section 305(k) of the Defense Production Act of 1950, as amended (50 U.S.C. App. 2095(k)), and having determined that the United States Synthetic Fuels Corporation is established and fully operational consistent with the provisions of the United States Synthetic Fuels Corporation Act of 1980 (Public Law 96-294; 94 Stat. 633 et seq.), and to provide for an orderly transition of synthetic fuel responsibilities from the Department of Energy to the United States Synthetic Fuels Corporation, it is hereby ordered as follows:

Section I. No new awards for purchases or commitments for financial assistance shall be made under the provisions of Section 305 of the Defense Production Act of 1950, as amended.

Sec. 2. Synthetic fuels projects or actions initiated by the Department of Energy shall, to the extent provided in the Supplemental Appropriations and Rescissions Act, 1980 (Public Law 96-304; 94 Stat. 880-881), transfer to the Corporation upon a majority vote of the Board of Directors of the Corporation, and unexpended balances of the funds obligated for such projects shall be transferred to the Corporation to the extent such projects are transferred to the Corporation.

Sec. 3. The balance of the amounts not committed or not conditionally committed by the Department of Energy which were appropriated by Public Law 96-304 and Public Law 96-126 from the Energy Security Reserve to the Department of Energy are available as provided in the Supplemental Appropriations and Rescissions Act, 1981 (Public Law 97-12; 95 Stat. 48), to carry out the provisions of Title I of the Energy Security Act (Public Law 96-294; 94 Stat. 616 et seq.).

Sec. 4. Executive Order No. 12242 of September 30, 1980 is revoked.

Sec. 5. Notwithstanding the revocation of Executive Order No. 12242, the provisions of that Order shall continue in full force and effect with respect to any loan guarantee issued under the provisions of that Order.

RONALD REAGAN

THE WHITE HOUSE,
February 8, 1982.

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The CHAIRMAN. Senator Melcher, do you have a statement you would like to make?

STATEMENT OF HON. JOHN MELCHER, A U.S. SENATOR FROM THE STATE OF MONTANA

Senator MELCHER. Thank you, Mr. Chairman. I am somewhat concerned about the Forest Service budget. It obviously is not meeting the Resource Planning Act goals for fiscal year 1983. While it shows a modest increase in budgetary figures over and above what it was last year, the fiscal year we are in right now, most of that increase would be assigned to payments to States so that it really doesn't mean much in terms of what we are doing on the National Forest.

It has to be borne in mind that ordinarily most of these costs for forest management are recovered, and the question of whether or not we are meeting our Resource Planning Act goals is a very vital one and one that Congress has been actively engaged in, in making certain that the Resource Planning Act is followed, so I will be interested in hearing from Mr. MacCleery on certain points that are involved with the budget.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much. Secretary MacCleery and Mr. Peterson, come forward with whatever other staff you wish to have at the table with you. Mr. MacCleery, we have your prepared statement. It will be placed in the record in full at this point. You may read it in full if you perfer. Or you may summarize it, or give highlights— whatever way you would like to do it is fine.

Mr. MACCLEERY. I think I would prefer to summarize it.

STATEMENT OF HON. DOUGLAS W. MacCLEERY, DEPUTY ASSISTANT SECRETARY FOR NATURAL RESOURCES AND ENVIRONMENT, DEPARTMENT OF AGRICULTURE, ACCOMPANIED BY HON. MAX PETERSON, CHIEF, U.S. FOREST SERVICE, DEPARTMENT OF AGRICULTURE; AND DOUG LEISZ, ASSOCIATE CHIEF, U.S. FOREST SERVICE, DEPARTMENT OF AGRICULTURE

Mr. MACCLEERY. I welcome the opportunity to appear before you to discuss the Forest Service's fiscal year 1983 budget. with me is Max Peterson, Chief of the Forest Service, and Doug Leisz, the Associate Chief.

In his budget message, the President indicated that the administration remains strongly committed to its plan for economic recovery. This plan contains four basic elements.

First is reduction in personal and business tax rates to stimulate savings, investment, work efforts, and productivity.

The second is reducing the rate of increase in Federal spending, borrowing, and credit demand.

The third is regulatory relief, and the fourth is monetary restraint.

The Department of Agriculture fiscal year 1983 budget, I think, reflects the essential elements of the President's program. It is 18 percent below fiscal 1982 appropriation level in budget authority and program level, and 20 percent below in outlays. The major reductions are concentrated in the international and commodity programs, and small community and rural development programs, and the domestic food stamps programs.

The fiscal 1983 programs of the Forest Service, without total adjustment for inflation, are proposed for just over $2 billion, which is a 9-percent increase over the 1982 level. We feel that this increase plus some important shifts in priorities among program areas will significantly raise the level of benefits to the American people and will provide for the sound and efficient management of our natural resources. These benefits range from economic goods like wood, mineral products, to such intangibles as improvement of wildlife habitat and wilderness.

The management of National Forests is clearly a Federal role, and it is the prospect of improving the return on the public's investment that justifies the increase in funding for the Forest Service.

I would like to outline some of the administration's priorities that have shaped this budget. We have emphasized in our programs those programs which enhance the economic strength of the United States and generate receipts to the Federal Government.

The National Forest System is a tremendous asset that can contribute directly to economic expansion. The National Forests contain over 50 percent of the Nation's standing softwood sawtimber inventory, and supply an estimated 25 percent of the potential domestic energy resources for oil, gas, coal, and geothermal.

There are also important deposits of strategic minerals. These resources will be needed to meet substantial increases in demand that are projected for the future. In fiscal 1982, receipts to the U. S. Treasury generated by Forest Service programs are expected to be $1½ billion, growing to over $2 billion in fiscal 1983. During the same period, payment to States will rise by $100 million.

We have emphasized increasing user fees for activities that are now being provided free or below cost. Where possible, the cost of providing goods and services should be borne by the people who actually receive these benefits rather than by the taxpayers as a whole. An example is increased user fees for recreation. Increased user fees also reduces the problem of Federal Government directly competing with the private sector.

We have, in addition to these areas I have just outlined, put an emphasis on increased efficiency. The Forest Service is making intensive efforts to increase efficiency in all its programs. To do this, we are putting an emphasis on economic analysis. Economic analysis will play a greater role in the Forest Service planning process by carefully examining cost benefits and analyzing tradeoffs between alternatives. In many program areas we will strive to maintain or increase resource outputs not through increased funding but by reducing costs. We will do this by emphasizing the compatibility among resource uses.

There will be less emphasis on single use management. We also made some specific management improvements such as holding road costs to the minimum necessary for the intended uses of the road. Savings for roads in fiscal 1982 from this are estimated to be $50 to $60 million with additional reductions in 1983. We will begin targeting our assessment of the effects of mineral leasing on the environment so that we do not carry out costly analyses evaluating hypothetical disturbances in areas where there are no specific proposals to develop. I would like to show how these priorities are going to be applied to selected areas.

In timber, the fiscal 1983 budget request provides for timber offerings of 12.3 billion board feet. This is a substantial increase over the 11 billion we expect to offer for sale in 1982, but it is comparable to the 12.2 billion that was offered in fiscal 1981.

Some of the reasons why we feel we need to emphasize increasing timber sales are that although the housing industry has been in a depression in the last 2 or 3 years due to high interest rates, when the interest rates do come down, there is a tremendous pent-up demand which unless adequate timber supplies are available could result in large increases in prices and substantially contribute to inflation.

It is important to improve the supply of raw materials and ameliorate such inflationary pressures that we have proposed. We have also proposed several changes to timber sale contracts, and directed the scheduling of more short-term sales to dampen bidding and make national forest timber more market responsive. It is important for purchasers to have at least a 3-year supply of timber under contract and a reasonable expectation of continued access to national forest timber in order to get credit or negotiate extensions of current loans.

Extension of most existing timber sale contracts was announced in October. While this will prevent economic disruption within the industry for the present time, the long-range solution must be more certainty and assurance about future timber supply.

It is also important to increase revenue produced from the national forests both now and in the future. In fiscal 1982 timber receipts are expected to be about $1 million and will rise to $1.6 million in fiscal 1983 as the recovery continues. Additional harvests are possible in those national forests which have large inventories of old growth of softwood sawtimber. The amount of this increase, however, will be determined by land management plans which are now being developed. We are presently losing large volumes to mortality and disease and have a potential for turning this around. After harvest of old growth we can dramatically increase net annual growth on those national forests through the use of intensive management practices and cost-efficient genetic improved programs, genetic improvement for tree improvement.

In addition to increasing the funding for timber-related programs, we are making an effort to reduce costs. Road construction and reconstruction projects are being carefully reviewed to keep costs down. Careful coordinating and coordinated management of existing roads can maintain their condition. We are closing some roads during certain periods of time to reduce their use and save costs both in design and in maintenance. In addition, we reduced the road costs associated with timber sales by concentrating timber sales in roaded areas.

In the area of mineral, the fiscal 1983 budget is a 35-percent increase above the 1982 level. The fiscal 1982 appropriation was 22 percent above the fiscal 1981 level. This is a reflection of the expanded program necessary to keep up with the increase in the number of and complexity of mineral claims, leasing applications, and operating plans. Energy prices have resulted in greatly intensified interest in mineral exploration and development on national forests. We expect in 1982 $185 million in receipts to be generated from the mineral activities. In fiscal 1983, receipts are expected to be $227 million.

As with the timber program, we are proposing to increase outputs by cutting costs as well as by increasing funding. We have found only a small proportion, about 2 percent, of oil and gas leases are ever developed. However, in the past we have conducted environmental assessments on all of these. In the near future, we will be incorporating contingent rights stipulations into our leases on a pilot test basis. Under this program, the bulk of the environmental analysis would be shifted to the operational stage; broad land management concerns, and well-defined critical issues will be identified and addressed in the lease stipulation, but the lease would contain the requirement that the right to explore and develop is contingent on forest service approval of an acceptable operating plan. This concept will be tested in areas outside of designated wilderness, and criteria for using the contingent right stipulations will be developed.

On the subject of recreation, the administration's budget proposals contain two initiatives dealing with the recreational use of the national forests. First, about $100 million is requested, which represents an 11-percent increase in funding over 1982. This more than compensates for the effects of inflation and will help the Forest Service cope with a growing use of the national forest for outdoor recreation.

Second, the administration will propose legislation for additional authority to increase recreation fees charged by Federal land agencies. Receipts from the charges collected on the national forest will be deposited into a special account to be available for appropriation to the Forest Service. Over the period of several years, this proposal has potential to make part of the recreation program self-financing while providing a higher level of service than can currently be funded under the overall fiscal constraints we are now facing.

To achieve the increased output goals we have established for some Forest Service programs, it will be necessary to reduce resources allocated to other areas. Two of these areas, research and State and private forestry, I will discuss now.

Research—the fiscal 1983 budget for forest research is 11 percent below the amount appropriated for 1982. We will still be funding a major research effort intended to target serious problems. For example, our research on acid rain, acid precipitation, will double over 1982 levels. The Forest Service will give emphasis to maintaining ongoing research on timber management and genetics, protection of forest and rangelands from serious insect and disease problems, protection from fire, forest products, and engineering, and forest economics and inventory. However priority research will be delayed or terminated.

On the State and private forestry issue, these programs will be funded at 25 percent less than those levels funded in 1982. Our overall budget constraints require that we give primary emphasis to those programs required to manage the national forests. It is also important that while not displayed in the Forest Service budget, recent changes in tax laws have provided the incentive which should encourage productive management of the private woodland. Two of these are the reforestation tax credit and the reduction in inheritance taxes which should provide a major incentive that would replace some direct Federal subsidies for forest management.

In forest management, the administration's policy is that priority should be given to protecting Federal lands from major outbreaks of pests that do serious damage. In the case of State and private lands, there is less justification for a direct Federal role.

Rural fire protection has actually been increased slightly above 1982, and will permit small additional grants to States for performing analyses that determine the economic efficiency. Other State and private activities are being reduced or eliminated with greater reliance being placed on State and local governments and the private sector to achieve improved utilization and management.

To carry out our programs which are included in the budget, it will be necessary for the Forest Service to further increase efficiency. This will involve consolidation or phasing out of certain work units, particularly in the research program. In addition, we intend to evaluate potential savings resulting from a combination of certain regions, stations, and area offices. We will, of course, advise this committee before undertaking any such actions.

I touched on the programs where the administration's new priorities are most evident. After Chief Peterson provides an overview, we would be happy to address any questions that the committee may have.

The CHAIRMAN. Thank you very much.

[The prepared statement of Mr. MacCleery follows:]

STATEMENT OF
DOUGLAS W. MACCLEERY, DEPUTY ASSISTANT SECRETARY
FOR NATURAL RESOURCES AND ENVIRONMENT
U.S. DEPARTMENT OF AGRICULTURE

BEFORE THE COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE

FEBRUARY 10, 1982

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE:

I welcome the opportunity to appear before you today to discuss the FY 1983 budget for the Forest Service. I am accompanied by R. Max Peterson, Chief of the Forest Service.

In the Budget Message submitted to the Congress on Monday, the President reasserted his firm resolve and adherence to the four policy fundamentals of his economic recovery plan:

- Reduced personal and business tax rates to stimulate saving, investment, work effort, and productivity.
- Firm control over the growth of overall Federal spending, borrowing, and credit demand,
- Decreased Federal regulatory burden where the Federal Government has intruded excessively and unnecessarily.
- In cooperation with the independent Federal Reserve Board, a steady and moderate growth in the money supply to reduce inflation.

During 1981, the Administration worked with the Congress to take major steps toward implementing this program:

- Congress passed the Economic Recovery Tax Act, the largest tax cut in history for businesses and individuals.
- In the Omnibus Budget Reconciliation Act, Congress reformed entitlement and other programs, saving $130 billion over the 1982-84 period.

The 1983 Budget will continue to diminish the rate of growth of Federal spending and to shrink the Government's share of GNP. As a result, resources will remain permanently in the more productive private sector.

The Administration is proposing a FY 1983 budget for the Department of Agriculture that is 18 percent below the FY 1982 appropriation level in budget authority and program level and 20 percent below in outlays. The major reductions are concentrated in the international and commodity programs, the small community and rural development programs and the domestic food assistance programs.

The FY 1983 programs of the Forest Service, without total adjustment for inflation, however, are proposed for $2,132 million, a 9 percent increase or $181 million above the level appropriated for FY 1982. About $1,494 million is being requested as annual appropriations with another $638 million in expenditures being financed by permanent appropriations, trust funds and other sources. This includes $342 million for payments to States which is an increase of $100 million over FY 1982 due to a projected increase in receipts from Forest Service programs. Excluding payments to States, the FY 1983 budget is $1,790 million. The increase requested plus some important shifts in funding among program areas will significantly raise the level of benefits to the American people and will provide for the sound and efficient management of our natural resources. These benefits range from economic goods like wood and mineral products to such intangibles as the improvement of wildlife habitat and wilderness. Management of the National Forests is clearly a Federal role. It is the prospect of improving the return on this public investment that justifies the increase in funding for the Forest Service.

I would like to outline some of the Reagan Administration's priorities that have shaped this budget.

We have emphasized programs which enhance the economic strength of the United States and generate receipts to the Federal Government. The National Forest System is a tremendous asset which can contribute directly to economic expansion. National Forests contain over 50 percent of the Nation's standing softwood sawtimber supply and an estimated 25 percent of the potential domestic energy resources of oil, gas, coal, and geothermal steam. There are also important deposits of such strategic minerals as cobalt, tantalum, and the platinum group metals. In FY 1982, receipts to the U.S. Treasury generated by Forest Service programs are expected to be $1,503 million, growing to $2,060 million in FY 1983. During the same period, payments to State and local governments will increase from $242 million to $342 million.

We have emphasized increasing user fees for activities that are now being provided free or below cost. Where possible, the cost of providing goods and services should be borne by the people who actually receive the benefits rather that the taxpayers as a whole. Examples are increased fees for recreational use and government publications. Increasing user fees also reduces the problem of the Government directly competing with the private sector.

We have emphasized increased efficiency. The Forest Service is making intensive efforts to increase productivity. To do this, economic analysis is playing a greater role in the Forest Service planning process by carefully examining benefit/costs and tradeoffs among alternatives. In many program areas we will strive to maintain or increase resource outputs not by increased funding but by reducing the costs involved. We will accomplish this by emphasizing the compatibility among resource uses such as timber, recreation, wildlife, and range. We will also make some very specific management improvements such as holding road costs to the mimimum necessary for the intended use. Estimated deferrals and cost savings in FY 1982 are $50 to $60 million with additional cost reductions expected in FY 1983. We will begin targeting our assessments of the effects of mineral leasing on the environment so that we do not carry out costly analyses evaluating hypothetical disturbances in areas where there are no specific proposals to explore or develop.

I would like to show how these priorities were applied to some selected Forest Service programs.

Timber

The FY 1983 budget request provides for timber offerings of 12.3 billion board feet (bbf). This represents a substantial increase over the 11.0 bbf we expect to accomplish with the funding available from the FY 1982 Appropriation Act, and it is comparable to the 12.2 bbf that was offered for sale in FY 1981.

Here are some of the reasons why we need to begin increasing timber sales:

° The housing industry has been depressed since 1978 due to high mortgage interest rates. During this same period, a large portion of the children born during the post war baby boom have reached the age when they would normally enter the housing market. This has created an enormous pent-up demand for housing, the largest market for timber products. In past housing booms, rapidly increasing lumber prices have contributed to inflation and hindered industry in its efforts to meet consumer demand for affordable housing. We are determined to improve the supply of raw materials and ameliorate such pressures in the future. We have also proposed several changes to timber sales contract procedures and directed the scheduling of more short term sales to dampen bidding at levels that reduce the market responsiveness of National Forest timber.

° The timber industry, a major employer in several States and many communities, has been hard hit by the current slump in housing. For many firms it is critical to have at least a three-year supply of timber under contract and the reasonable expectation of continued access to National Forest timber in order to get new credit or to negotiate extensions of current loans. An extension of most existing timber sales contracts was announced in October. While this will help prevent economic disruption within the industry for the present time, the long range solution must be more certainty and assurance about the future timber supply coming from the National Forests.

° It is important to increase the revenue produced by the National Forests both now and in the future. In FY 1982, timber receipts are expected to be $1,063 million and will rise to $1,666 million in FY 1983 as the recovery continues. Additional harvests are believed possible in those National Forests which have large inventories of old-growth softwood sawtimber. The amount of increase will be determined by the land management plans now being prepared. We are presently losing unacceptably large volumes to mortality and disease. After harvest of the old-growth, we can dramatically increase the net annual growth on those forests. The use of intensive management measures and genetically improved trees offers the prospect of continued high harvest levels for the indefinite future.

The budget proposes a total of $886 million for the timber sales program, reforestation and timber stand improvement--a 14 percent increase over FY 1982. About $253 million of these funds are for roads. In addition to preparing for increased future sales, the budget gives more emphasis to reforestation than to timber stand improvement in order to continue on the congressionally mandated track to eliminate the economically feasible portion of the reforestation backlog by 1985.

In addition to increasing the funding for timber related programs, we are making a concerted effort to reduce costs. Road construction and reconstruction projects are being carefully reviewed to keep costs down to the minimum necessary for the anticipated use of the road. Careful and coordinated management of existing roads can maintain their condition. We will be closing some roads during certain periods or restricting their use. In addition, we can reduce the road costs associated with timber sales by concentrating timber sales in roaded areas.

Minerals

The FY 1983 budget request for minerals of $25.0 million is a 35 percent increase above the amount appropriated for FY 1982. The FY 1982 appropriation was a 22 percent increase above the FY 1981 level. Special emphasis is being given to coal, petroleum, goethermal energy, and to strategic minerals. The expanded program is necessary to keep up with the increase in the number and complexity of mineral claims, lease applications, and operating plans. The intensifed interest in mineral exploration and development on the National Forests has resulted primarily from the Nation's need for energy-related minerals and the impending closure of wilderness areas to mineral exploration after

December 31, 1983. In 1982, $185 million in receipts to the Federal Government are expected to be generated from mineral activity on the National Forests. In 1983, receipts will be $227 million.

As with the timber program, we are proposing to increase outputs by cutting costs as well as by increasing funding. In the past, we have found that only a small portion--about 2 percent--of the oil and gas leases on the National Forests are ever drilled and fewer still are ever developed. However, we have conducted environmental assessments on the entire areas before leasing. In the near future we will begin incorporating "contingent right stipulations" into our leases on a pilot test basis. Under this program, the bulk of the environmental analysis would be shifted to the operational stage. Broad land management concerns and well-defined critical issues would be identified and addressed in lease stipulations. Further detailed analyses would occur when and if the project reaches the operational stage. At that time, an environmental assessment will be conducted, and if necessary, an environmental impact statement prepared. A recommendation will then be made to the Department of the Interior that the mineral activities proceed with appropriate safeguards for the surface environment or, if appropriate, that no exploration or development be permitted. This should decrease the cost to the Forest Service of processing mineral leases and also expedite the service provided to the mining industry without, in any way, jeopardizing environmental safeguards.

Under the contingent right stipulation concept, the lease would contain an added stipulation that the right to explore or develop is contingent on Forest Service approval of an acceptable operating plan. The concept will be tested in selected areas excluding designated wildernesses and criteria for using contingent right stipulations will be identified.

Recreation

The Administration's budget and legislative proposals for FY 1983 contain two initiatives dealing with the recreational use of the National Forests.

First, the $97.9 million requested represents an 11 percent increase in funding over the amount appropriated for FY 1982. This more than compensates for the effects of inflation. It will offset some of the services that were formerly provided by the Youth Conservation Corps and Young Adult Conservation Corps. This will help the Forest Service cope with the growing use of the National Forests for outdoor recreation.

Second, the Administration will propose legislation asking for additional authority to increase recreation fees charged by the Federal land agencies. Receipts from the charges collected on the National Forests will be deposited to a special account to be available for appropriation to the Forest Service. Over a period of several years, we think that this proposal has the potential to make part of the recreation program self-financing while providing a higher level of services than can currently be funded within the overall fiscal constraints we are now facing.

Reductions

In order to achieve the increased output goals we have established for some Forest Service programs, it has been necessary to reduce the resources allocated to other areas. I would like to explain what we plan to do in two of these areas, Research and State and Private Forestry.

Research

The FY 1983 budget for Forest Research of $98 million is 11 percent below the amount appropriated for FY 1982. We will still be funding a considerable research effort intended to target some serious problems. For example, our research on acid precipitation will double over the FY 1982 level. The Forest Service will give emphasis to maintaining ongoing research on timber management and genetics, protection of forest and rangelands from serious insect and disease problems, protection from fire, forest products and engineering, and forest economics and inventory. Lower priority research will be delayed or terminated. The Forest Service is also participating in a joint study with the Agriculture research agencies and OMB to determine if some types of research would be better left to private industry and to help identify priority areas for future work.

State and Private Forestry

The FY 1983 budget for State and Private Forestry of $47.5 million is 25 percent less than the amount appropriated for FY 1982. We are requesting this reduction because our overall budget constraints require that we give primary emphasis to those programs required to manage the National Forests. It is also important to note that, while not displayed in the Forest Service budget, private landowners have been given major economic incentives to engage in forest management by Public Law 96-451 which provides for tax credits and depreciation of reforestation costs. In addition, the Economic Recovery Tax Act of 1981 reduces income and inheritance taxes which would provide additional incentives for private forest landowners.

In Forest Pest Management, the Administration's policy is that priority would be given to protecting Federal lands from major outbreaks of pests that do serious economic damage. In the case of State and private lands, there is less justification for a direct Federal financial role. Thus, cost-sharing for suppression should be focused primarly on outbreaks where Federal and other lands are intermingled or where Federal assistance is required to ensure that sound pest management approaches are utilized. The Administration's FY 1983 budget will continue this direction in sorting out State and Federal roles. The Department of Agriculture will continue its efforts in research, methods development, and technical assistance to help States deal with forest insect and disease pests. Our goal is to phase out funding continuing large scale cost-sharing suppression programs that are aimed at chronic pests and do not involve Federal land.

Rural Fire Protection has actually been increased slightly above the FY 1982 appropriation level. This will permit small additional grants to States for performing analyses to determine the economic efficiency of fire protection programs.

The Forest Service will continue to provide a $3 million annual grant to the State of Minnesota for intensive timber management of State and private lands to help offset timber impacts associated with the designation of the Boundary Waters Canoe Area Wilderness.

The other State and Private Forestry activities are being reduced or eliminated with greater reliance being placed upon the States, local governments, and the private sector to achieve improved utilization and management of the privately owned forest lands.

Additional Changes Required

In order to carry out the programs which are included in this budget, it will be necessary for the Forest Service to further increase efficiency. This will involve the consolidating or phasing out of certain work units, particularly in the Research program. In addition, there may be a need to look at the combination of Region, Station, and Area offices. The Appropriation Committees in the past have included language in the administrative provisions of the Appropriations Act which precluded the expediture of funds to change the boundaries of any region, or to move or close any regional office for Research, State and Private Forestry, and the National Forest System without the consent of the concerned congressional committees. We are requesting the Appropriation Committees eliminate this language thus allowing us the opportunity to objectively consider boundary changes and consolidation of units to further reduce cost and increase effifiency. We, of course, will advise the concerned committees before undertaking such action.

I have touched on the programs where the Reagan Administration's new priorities are most evident. After Chief Peterson provides an overview, we would be happy to address any questions that the Committee may have.

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE OVERVIEW
(Dollars in Millions)

		1981 Actual	1982 Appropriation Enacted to Date	1983 President's Budget	1983 RPA
Research		$ 108	$ 110	$ 98	$ 190
State and Private Forestry		71	64	48	138
Timber sale and Related Cost	1/	542	579	665	883
Timber sales offering (BBF)		12.1	11.0	12.3	12.3
Timber sales offering (BBF) 1985		--	--	12.3	12.3
Reforestation and timber stand improvement		200	206	211	263
Fire protection, road maintenance etc. (other than timber support)		368	238	250	428 ~~437~~
Recreation, wildlife, range, soil, and water (other than timber support)		174	173	173	400
General Administration	2/	267	239	261	196 ~~287~~
Construction (Non-Timber)		33	42	46	218 ~~227~~
Payments to States		241	242	342	374
Coop./Land Acquisition	3/	33	58	38	171
Mt. St. Helens	4/	36	--	--	--
TOTAL, FOREST SERVICE		$2,074	$1,951	$2,132	$ 3,370

(Columns may not add due to rounding.)

1/ Timber Purchaser Credit is not included. Timber Purchaser Credit for 1981=$210 million; for 1982=$242 million; for 1983=$268 million and 1983 RPA=$283 million.
2/ Includes General Administration for Research, S&PF, and Construction.
3/ Includes L&WCF land acquisition in 1983.
4/ Includes in regular line items for 1982 and 1983.

STATEMENT OF HON. MAX PETERSON, CHIEF, U.S. FOREST SERVICE, DEPARTMENT OF AGRICULTURE

Chief **Peterson**. Thank you very much, Mr. Chairman. We have some charts here that we thought might be helpful to just present an overview of the budget.

First, as Deputy Assistant Secretary MacCleery has already said, in putting together the budget we looked at such things as the long-term supply-and-demand situation which as you know indicates a growing demand for virtually all the goods and services for the forests and rangelands.

We looked at housing starts which, of course, is a mixed question in the near future, but in the long term we would expect a continued strong demand for housing.

We looked at the continuing increase in mineral exploration and development which, as you know, Mr. Chairman, has been growing faster than any of us anticipated.

We are, as Mr. MacCleery has also indicated, looking to emphasize management of the national forests in terms of some major new investments, with greater reliance on State and private sector for handling State and private lands. The result of this will be increased receipts to the Federal Government.

We are continuing the effort we started several years ago to improve the efficiency in what we do. Mr. Chairman, because of your strong interest in oil and gas leasing. I thought we might mention one idea that shows great promise of saving money. When we get a request for a lease, we don't know whether that lease will go all the way through the exploration and development phase or whether it will be one of those 98 percent that never gets drilled on. Because we can be challenged in court if we have not considered all of the feasible potential ways of developing that area, we have actually had to figure out floating oilfields and all kinds of potential ways that that could be developed at the time we issued the lease. This is because when you issue the lease, you give away all your rights to ask questions later about whether all of it could be developed.

What we are proposing now is to address in the lease only the exploration phase which generally may be fairly light. We know what it is, so we are not addressing hypothetical questions. The lease will be issued, but the environmental analysis will only address the exploration phase. Then at the time that they want to go to development we will address the development phase, and we know what we are dealing with there. That could help us markedly clear up the backlog of oil and gas and geothermal leases while at the same time protecting the public's right to make subsequent decisions later on.

The **Chairman**. I will ask some questions about that a little later.

Chief **Peterson**. I thought you would be interested in that particular one because it indicates it would save us several million dollars by following that procedure.

In making a comparison of 1982 and 1983 regular appropriated funds, in 1982 they were $1.429 billion. They would rise to $1.494 billion in 1983. The change there is in total $65 million, and we will explain later the substantial shifts between programs, but on a gross basis there is an increase of $65 million.

A major change in permanent appropriations is in payments to States which are projected to be up $100 million; minor changes in our various working funds are things like brush disposal, trust funds, and a minor change like Knutson-Vandenberg funds for reforestation. Overall, the 1983 total is up to $182 million, again most of that being payments to States.

We would be decreasing the work force by about 1,750 full-time equivalents. Giving you a brief overview of where the dollars would go to, about 63 percent would be in the national forest system appropriation. Closely related to that is the 14 percent for construction. Most of that is on the national forest system; 2 percent going to State and private forestry for cooperation of the States; about 5 percent going to research and 16 percent going for payments to States. You will note that YCC is shown at zero, which is consistent with last year's budget.

Looking now at specific program areas, as has already been mentioned, the research program is down 11 percent between 1982 and 1983. These figures, incidentally, do not include general administration. Since the general administration account was established last year by the Congress, we have had to remove the general administration item from 1981 and 1982 in order to make 1983 comparable. If you just look at a copy of our 1981 and 1982 budgets, you won't find these same numbers unless you exclude the general administration item which was moved into a separate appropriation item in 1982.

In research you will notice that we plan to reduce full-time equivalents by 540 people, which is between 20 and 25 percent of the research work force. The distribution of the research program is shown on the opposite chart where you see that the two big items or the three big items actually in research are in protection, timber management, and utilization and engineering which are the three major items in our research budget.

In State and private forestry, as has already been indicated, the proposal is reduced from $63.7 to $47.5 million. This is money made available to the States for fire protection, insect, disease control, and so on. There is the matter of tax incentive which is provided under Senator Packwood's bill of last year which will help offset this reduction. In fact, it is computed by the Treasury to be worth maybe $30 million. The chart shows the distribution of that money, most of it going in pest management. The second highest went into cooperative fire. We had held both of those items up. Although we have had to reduce pest management some, we have not reduced it near as much as the other items.

Boundry Water Canoe Area funding has $3 million which provides money to the State as an offset to allow them to intensify management on private lands.

The total in the national forest system, as you can see, is up slightly from 1982 to 1983. The increase there is basically increased timber sale offerings, and in oil, gas, and mineral leasing, with reductions in other activities except for recreation which holds about the same.

Looking at the national forest system, you will notice that about 52 percent is on timber sales and support costs; 16 percent in reforestation timber stand improvement; about 13 percent soil, water, range, wildlife, and recreation; and 19 percent in fire protection and road maintenance. We will make a copy of these charts, Mr. Chairman, available to you and the staff.

The CHAIRMAN. We have them. Thank you.

Chief PETERSON. Construction excludes timber purchaser credits because it is not a direct budget item. Timber purchaser credits actually works as a reduction from receipts and is already accounted for there. You will notice the construction budget increase is from $254.5 million to $297.5 million.

The CHAIRMAN. Do you have a similar chart that includes the timber purchaser credits?

Chief PETERSON. Yes, sir. We have a chart that shows that.

The CHAIRMAN. That shows the construction account totals?

Chief PETERSON. I have a chart that shows the numbers that we can give you. It is not a visual.

The CHAIRMAN. Thank you.

Chief PETERSON. I might comment here that the primary change here is in road construction because we have an increased timber program, and in some places we are working with roadless areas.

The other big item there is the reconstruction of the Redding Emergency Service Center which was destroyed last year when an airplane crashed into it. Other than that, there is some construction in Alaska and some health and safety items.

The CHAIRMAN. In effect, to get the total construction, including the timber purchaser credits, we just add the two numbers that appear on that chart?

Chief PETERSON. Yes, sir; just add those two numbers.

The CHAIRMAN. Thank you.

Chief PETERSON. In land acquisition, the proposal is to reduce land acquisition requests from the 1982 budget of $26.3 million down to $7.6 million which basically would allow covering deficiency awards in court cases on land and water conservation cases, staff work necessary to handle those cases, plus completing some purchases that are underway.

The CHAIRMAN. How about such things as the Sawtooth national recreation area?

Chief PETERSON. It would not provide funds for additional acquisition there until they were already underway.

The CHAIRMAN. Are you going to just leave them hanging?

Chief PETERSON. If they go to court, there is a deficiency award that would cover that.

The CHAIRMAN. You don't plan to take them to court? They have to take you to court?

Chief PETERSON. No. Yes, sir, which they can under that law.

The CHAIRMAN. Who pays the attorney fees?

Chief PETERSON. I don't know. The court would decide that, I guess.

The CHAIRMAN. The attorneys get a contingency fee and they take it out of the hide of the landowner.

Chief PETERSON. Might be; we would, of course, try to work with that. If an owner said I am going to invoke this provision unless you acquire it, we would try to work with that, but there is no funding specifically for that in this budget because we don't know that that will occur.

The last chart in this series basically is the permanent and trust fund. This covers the brush disposal, timber purchasers roads where they are turned over to us to build under the small purchasers election, the Tongass timber supply fund established in Alaska, payments to States from receipts, K-V reforestation and timber stand improvement, and we have given you details on these items.

Looking then at the total, this is what the total budget looks like. Senator Melcher, I haven't referred to it specifically, but each one of these charts compares the budget with RPA. This last chart is one we just prepared to show the change within resource functions of the national forest system. The totals were about the same as they were in 1982 but as Mr. MacCleery has already pointed out, the increases are in timber, in minerals, recreation, and a small amount which tries to partially keep up with inflation in protection.

The major reductions of fish and wildlife are roughly the same. There is a substantial change in soil and water where we are trying there to keep up with the action programs. This is where we are actually disturbing areas, but we are not attempting to go back and cure any past problems, to do any specific rehabilitation and so on. We will provide you with a copy of this. We just got this one this morning.

Thank you, Mr. Chairman. That concludes the overview, and we will be glad to answer your questions.

[The charts submitted by Chief Peterson follow:]

Forest Service

Major Considerations

- Long term demand/supply situation
- Housing starts
- Mineral exploration and development
- Emphasize management of the National Forests
- Greater reliance on state and local governments and the private sector
- Increased receipts to the federal government
- Increased Forest Service efficiency

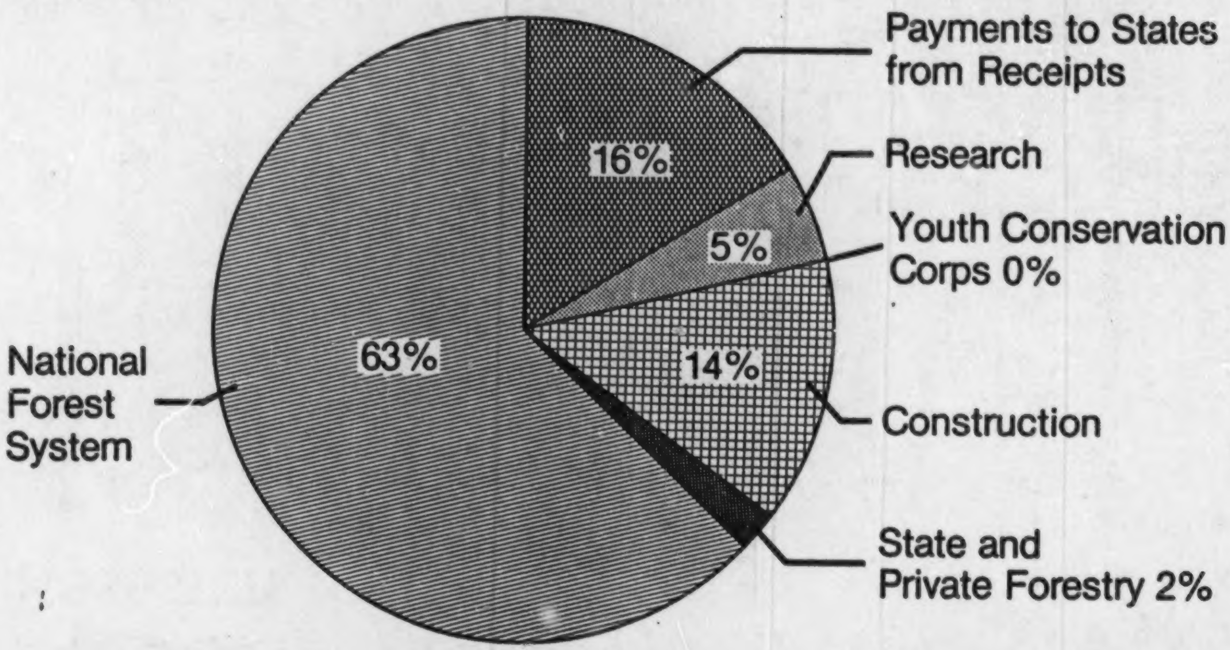
Forest Service

Summary Comparison
($ Millions)

	1982	1983	(Change)
Regular Appropriated	$1,429	$1,494	(+65)
Permanent Appropriated:			
Working Funds	135	150	(+15)
Payments to States	242	342	(+100)
Trust Funds	145	147	(+2)
Total	$1,950	$2,132	(+182)
Work Years (FTE)	44,136	42,385	(-1,751)
Receipts	$1,503	$2,060	(+557)

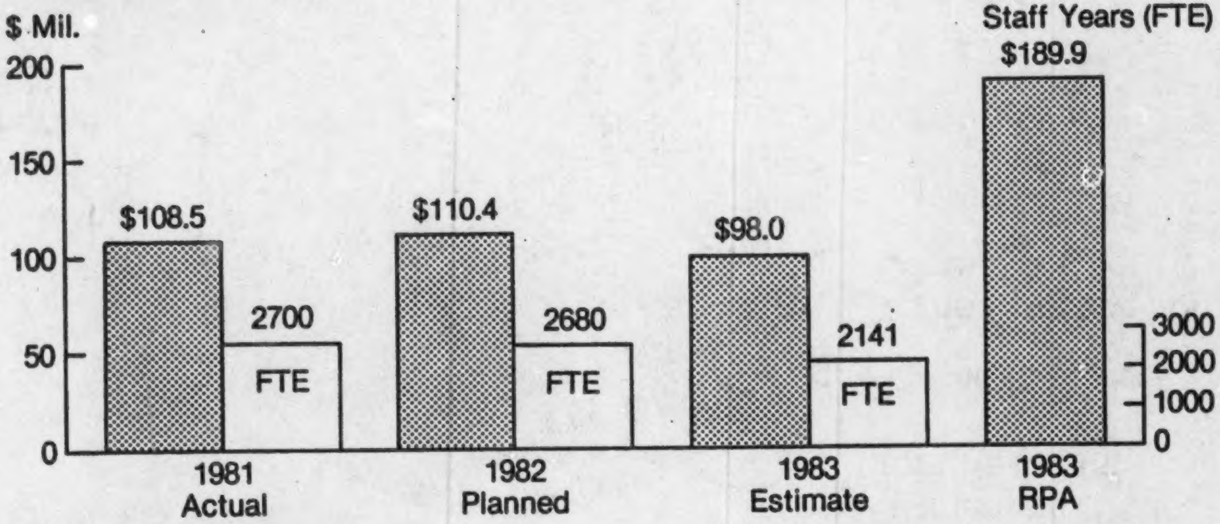
Forest Service

Distribution of 1983 President's Budget



Forest Service

Research

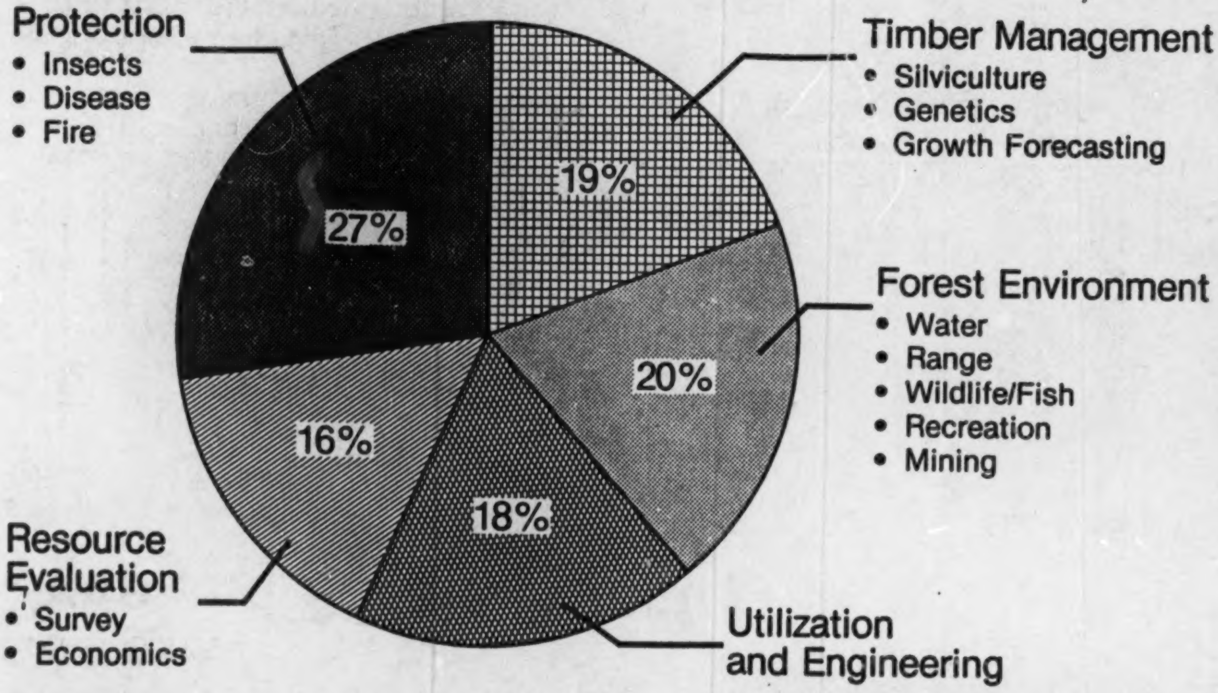


1983 Program Emphasis:

- Timber management and genetics
- Protection of resources
- Acid rain
- Range, recreation and watershed management
- Forest products and engineering
- Forest economics and inventory

Forest Service

Research Program FY 1983



Protection
- Insects
- Disease
- Fire

Timber Management
- Silviculture
- Genetics
- Growth Forecasting

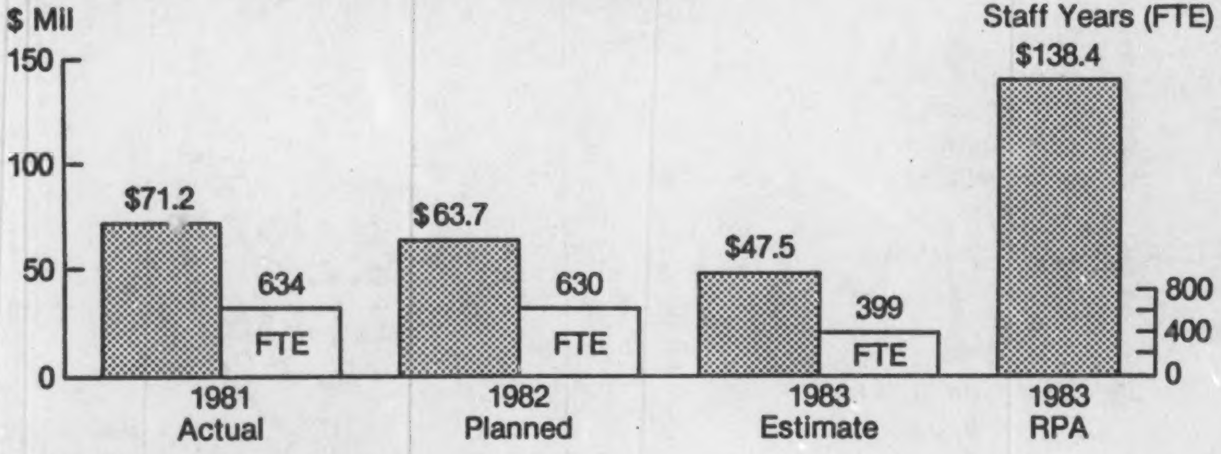
Forest Environment
- Water
- Range
- Wildlife/Fish
- Recreation
- Mining

Utilization and Engineering

Resource Evaluation
- Survey
- Economics

Forest Service

State and Private Forestry

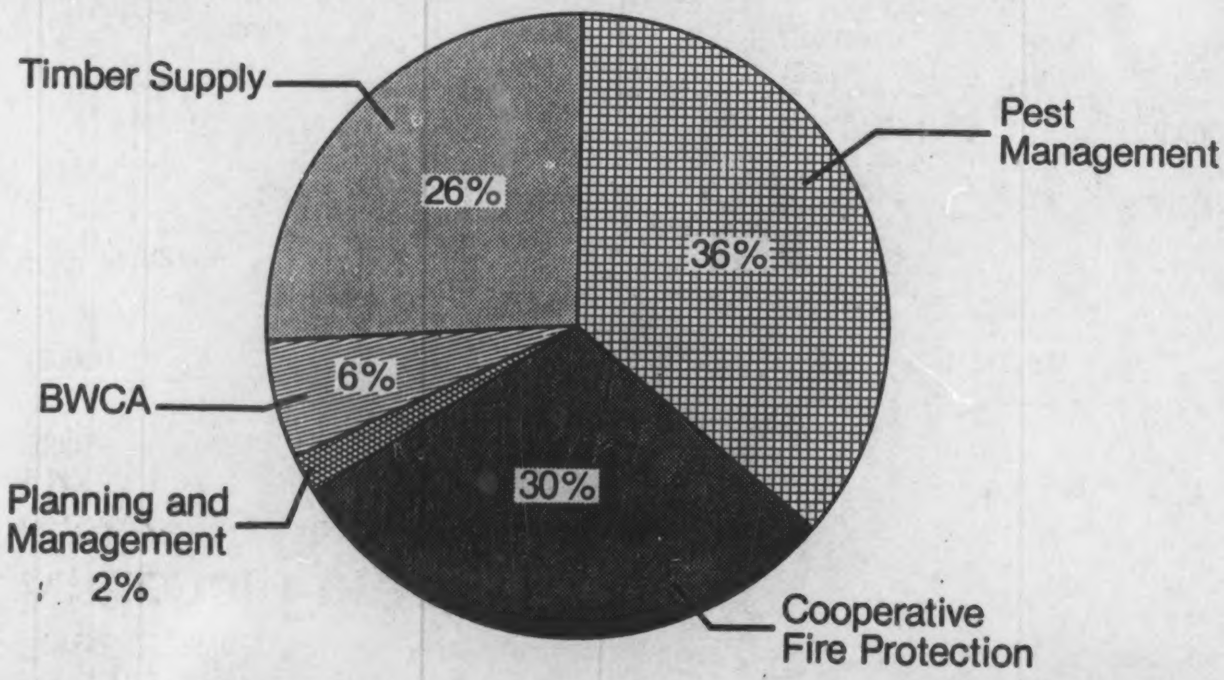


1983 Program Emphasis:

- Rural fire protection and control
- Forest pest management on federal lands
- Planning assistance to states where softwood supplies can be increased and state resource plans will be completed
- Boundary waters canoe area

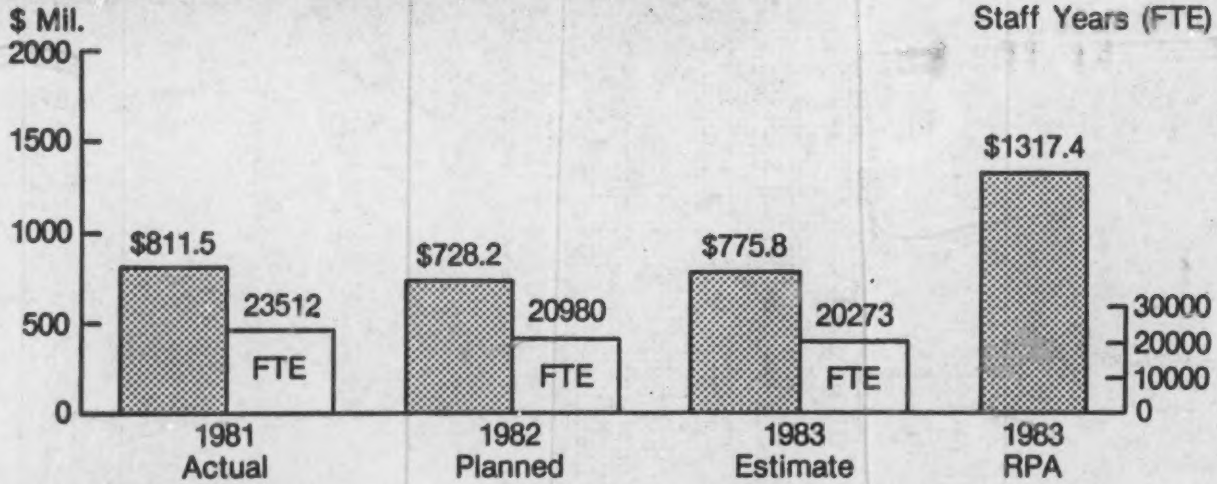
Forest Service

State and Private Forestry FY 1983



Forest Service

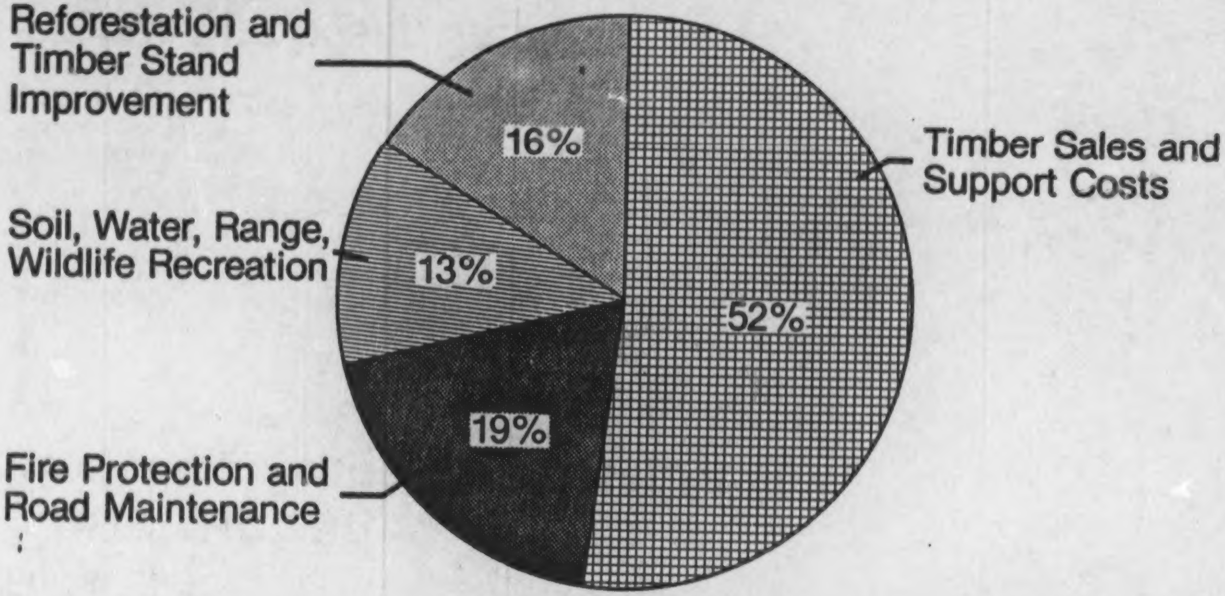
National Forest System
(Excluding General Administration)



1983 Program Emphasis:
- Timber sale offerings
- Oil, gas and mineral leases and claims
- Timber and mineral support
- Reforestation and the backlog
- Recreation management

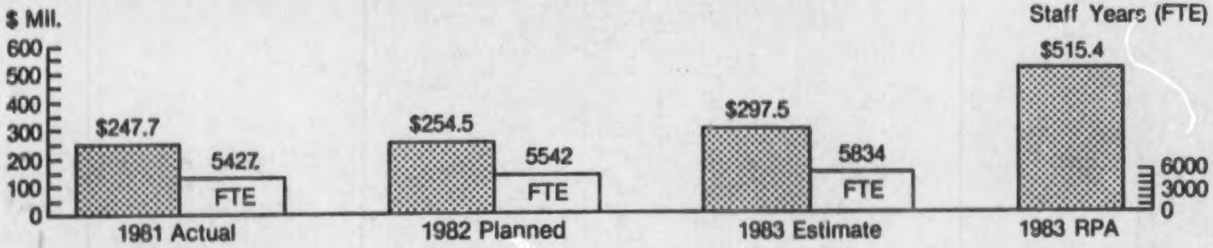
Forest Service

National Forest System FY 1983 (Excluding GA)



Forest Service

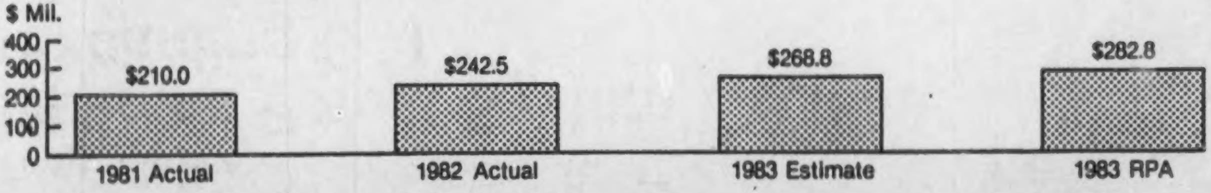
Construction (Excluding Timber Purchaser Credits)



1983 Program Emphasis:

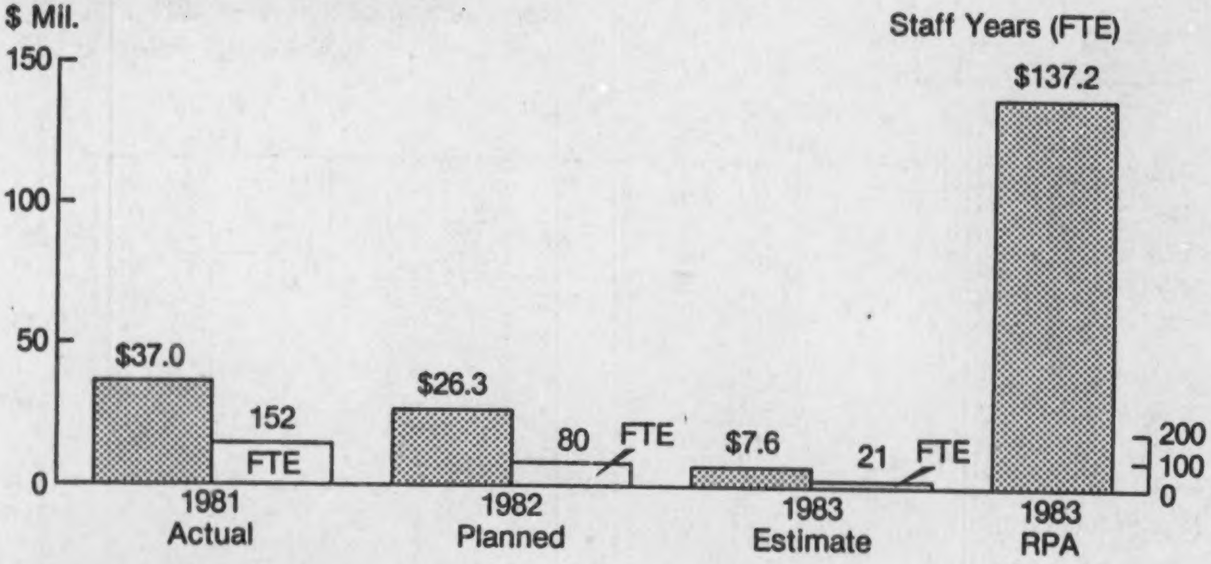
- Timber sale access
- Critical support facilities, particularly health and safety hazards

Timber Purchaser Credits



Forest Service

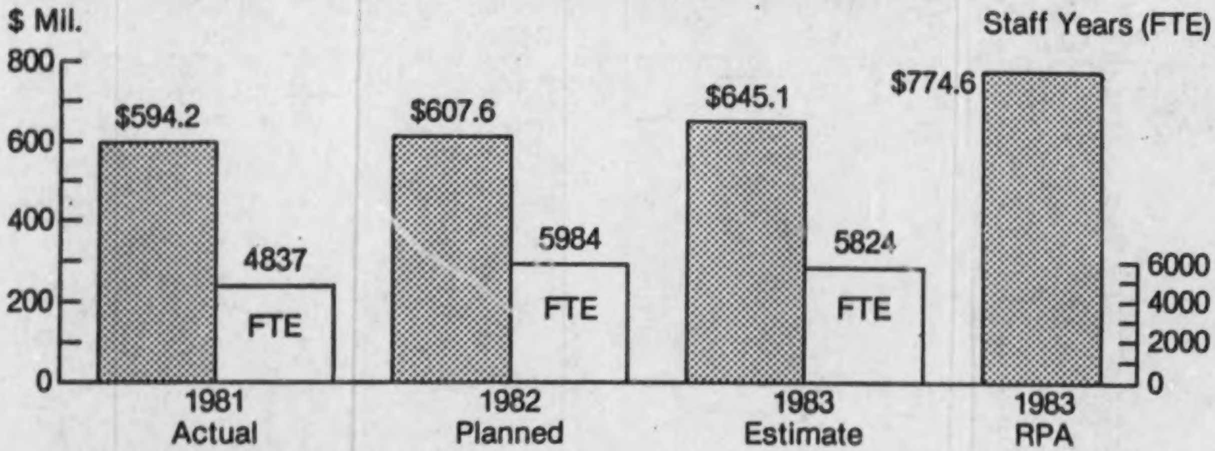
Land Acquisition



1983 Program Emphasis:
- Closing existing LWCF cases
- Provide for pending court deficiency awards

Forest Service

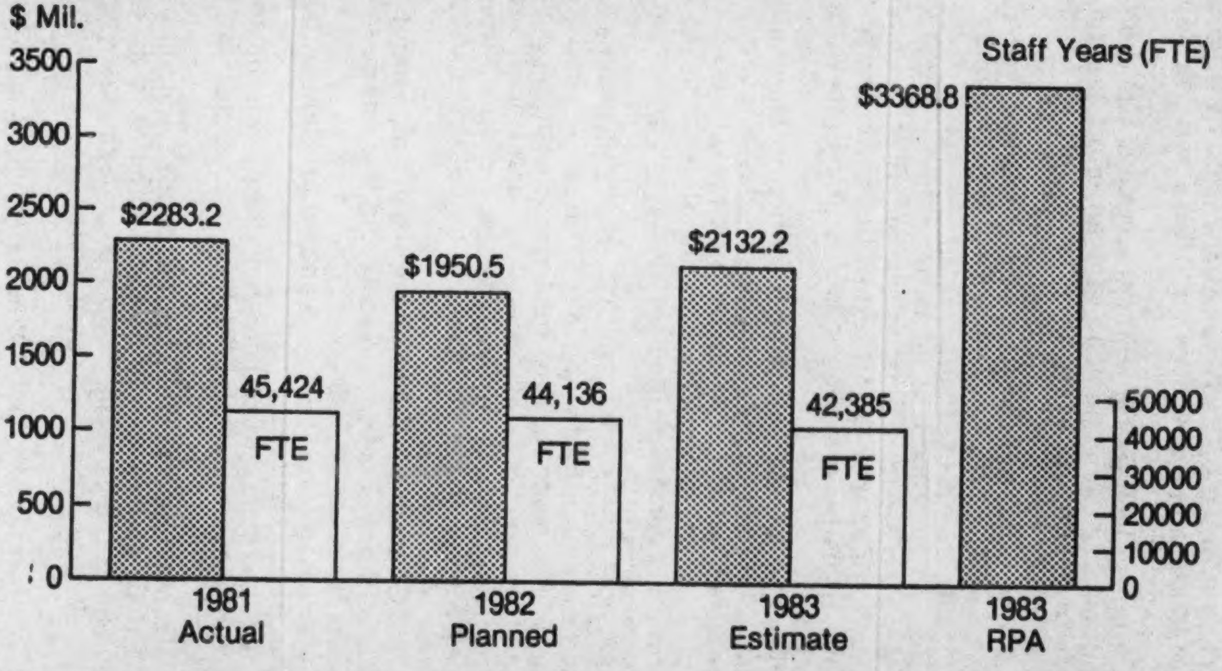
Permanent, Trust Funds and Other



1983 Program Emphasis:
- Brush disposal related to timber sales
- Timber purchaser roads constructed by the forest service
- Tongass timber supply fund
- Payments to states from receipts
- KV reforestation and timber stand improvement

Forest Service

Total
(Excluding Timber Purchaser Credits)



The **Chairman**. Thank you very much. I will take just a few minutes to ask a few questions and then I will call on my colleagues to ask questions.

I want to look first of all at the issue of the short-term sales. You mention in your statement that an effort is being made on your part to relate the sales price and volumes to market conditions more directly.

At the same time, in the next paragraph you mention the need for many firms to have at least a 3-year supply of timber under contract.

How do you correlate the two?

Mr. **MacCleery**. There will be an effort to emphasize short-term sales, to offer more short-term sales in the current period because many firms have timber which is priced above that which can be marketed.

The **Chairman**. Is it your intention in those areas to make sure that there are enough long-term sales so that the operators that need the 3-year supply under contract can keep the 3-year supply under contract? This then would allow them to bid in the short term and operate on the short term while they are rolling into the longer term.

Mr. **MacCleery**. Yes, sir. There will always be a role at least for the foreseeable future for long-term sales because of the efficiency. Many sales need to have road jobs, and it is just more efficient to put them up in a block because of access problems. We will, therefore, tailor the sale to them, as the conditions warrant, but for the next year or so we are going to emphasize short-term sales to the extent that we can.

The **Chairman**. Will short-term sales also imply that there is less road building construction costs and less purchaser credits?

Mr. **MacCleery**. Yes.

The **Chairman**. That is a major problem already, finding sales that are not deficiency.

Are you going to roll in short-term costs in an area where you already have deficiencies? It just exacerbates that problem, doesn't it?

Mr. **MacCleery**. Well, I am not sure I understand.

The **Chairman**. If you have got to build 10 miles of road and one long-term sale, you put up 10 short-term sales, you will build one mile of road per sale I take it?

Mr. **MacCleery**. In most cases it is just not——

The **Chairman**. You know my example is ridiculous, but that is the kind of situation I'm talking about.

Mr. **MacCleery**. Where we do have a legitimate reason, because of the circumstances, it requires a major road job that can't be separated into parcels, we will put it up as a long-term sale and emphasize short-term sales in those areas that are already roaded which can be turned around on a short-term basis.

The **Chairman**. I think the theory is good. I think it is going to be awfully hard to put into practice.

Mr. **MacCleery**. There are limitations as to how much we can go in this regard because of the circumstances. We need to move into some of the roadless areas, and we have those that don't lend themselves to short-term sales, as you well know.

Chief **Peterson**. If I might add, Mr. Chairman, in real life we probably would be only making 20 to 40 percent of the sales program on the short-term sales, and in some places it is going to be difficult even to make that many, so in regard to the real life kind of questions that you are bringing up, where we have a choice even though the sale might be smaller than we ordinarily let, we could make a short-term sale, so that we can get some timber moving, that is what we are trying to do.

It will not result, I don't think, in any great shift in the amount of timber under contract or the length of time.

The **Chairman**. I just wondered because we have more timber under contract than the market will now absorb. You also took the action which I urged, and I applaud, in the extension of those contracts. It is going to be awfully hard where you have made extensions to also work in short-term sales that they are expected to work instead of the contracts they already have.

Mr. **MacCleery**. One of the problems with the timber that is under contract is it is under contract at prices which cannot be moved easily in the current market.

The **Chairman**. Is it your expectation then that we will in those areas move short-term sales in and give further extensions to the existing contracts?

Mr. **MacCleery**. We have already given 2-year extensions, and we will just have to see how the market acts in the next few months to determine whether we need to go farther.

The **Chairman**. Is it not also a case that if you have large volume short-term sales your overhead will go up?

Mr. **MacCleery**. That's right. It is more costly to put up short-term sales and administer short-term sales than in the long term.

The **Chairman**. Do you have personnel limitations already?

Mr. **MacCleery**. That's right.

The **Chairman**. I want to change for a moment to the issue of how you plan to deal with this change in environmental impact statements on mineral leases.

If I understand you correctly, you are going to try to issue a lease that gives only exploration rights?

Chief **Peterson**. The lease is a full lease. It just has a contingency clause that says you do your exploration, then when you finish your exploration, you come and say here is what we plan to do with development, and we will approach that at that point which we do now. The only difference is that we clearly don't divest the right at the time the lease is issued to develop 100 percent of that area.

The **Chairman**. You make no decision as to whether it will be 100 percent or 2 percent of an area?

Chief **Peterson**. That's right. Now we are saying that we are not going to use this in an area that is existing wilderness, nor are we going to use this in an area where we don't think that the development is likely to be feasible. We have to go into it with a good faith effort that this is an area that we think we will be able to develop.

The **Chairman**. If I understand correctly, this proposal is getting attacked from both sides. I am not sure that proves it's right, although sometimes it does.

Chief **Peterson**. When we have been able to sit down and explain it to both sides—initially industry thought it was giving up something. Environmentalists thought it was a free and easy way to issue leases, so they both objected to it for different reasons.

When you sit down and go through it which we have now done with several groups, I think the opposition will largely disappear. We are planning to do it on a test basis, and as Mr. MacCleery said, outside of wilderness. We are not proposing to put that in an area where there aren't any problems. We propose to put it in sort of the middle kind of cases where nobody knows what is there.

The **Chairman**. Do I understand correctly that you are indicating that you will use this on only a small proportion of all the leases?

Chief **Peterson**. I wouldn't characterize it as a small proportion. It might be half of the leases.

The **Chairman**. I asked that question because from the standpoint of an administrator, it gives you a great deal more flexibility from the person that is going to do the exploration. He has to then make a decision to commit a large amount of money with a much greater degree of uncertainty.

From the environmentalists' standpoint, you are permitting somebody in without having made any analysis of what the future impact might be. You are going to weigh that in the process somewhere toward one of those, or the other. I don't think you can keep right down the middle. If you then weigh it toward the environmentalists' concern, you will almost certainly dry up exploration in those areas. Who is going to commit a lot of money until they have some idea of what it is you are going to permit them to do?

Chief **Peterson**. The actual experience which we think we can point to indicates that you probably have got about 98 or 99 percent certainty that you can do the development, so it is not a big gamble.

The **Chairman**. That then says to the environmentalists that indeed we are going to let them be 98 to 99 percent certain.

Chief **Peterson**. You do have a lot of discretion to work with them on, specifically where drill holes might be, what the access is going to be like, and so on. With a good faith effort, we have not had any great problem of finding you can do the development and still protect the environment.

The **Chairman**. Well, I am concerned about it. I will not belabor the point, but I think you are going to have a lot more difficulty making that work than it appears. I will discuss that with you either later on in the questioning or after the hearing because I think it is a good idea. I am just not sure how well it is going to work in this situation.

I want to turn to the issue on the next page if I may.

Chief **Peterson**. Let me add one other point. The pilot test that we are going to undertake right away we hope will help both test the feasibility and shake out these concerns on all sides.

The **Chairman**. We will watch that with a great deal of interest I'm sure.

Senator **Melcher**. Where is the pilot test?

The **Chairman**. Is this just limited or aimed at geothermal?

Chief PETERSON. No, sir—mainly oil and gas; it might be used in some geothermal. There is already a phased environmental review system in geothermal which is pretty close to this.

The CHAIRMAN. Yes. You mention that you are increasing funding for recreational use management by about $9 million up to $91.9 million or an 11 percent increase in funding. You mention in the same paragraph that this will offset some of the services that were formerly provided by the Youth Conservation Corps.

I looked at that in your presentation and I was a little perplexed by it. You zero out the Youth Conservation Corps and turn around and put money in to do what they are doing, but in a more expensive way I might add. I thought maybe you were trying to tell us something. When I looked at the charts, I became convinced you are trying to tell us something because the charts indicated when you got to the percentage shares it is zero for the Youth Conservation Corps. It is the only zero in the whole area that was put on the chart. There are an awful lot of things that are zero. So I thouqht to myself well, with the language in the statement and the addition in the chart, you are really trying to say to us don't zero out the Youth Conservation Corps. It is bump economics.

Chief PETERSON. No, that is not what we are trying to say. We should have made it clear that we are talking both about the Young Adult Conservation Corps and YCC, which both of those programs were used heavily in recreation.

The CHAIRMAN. And they were dollar efficient, weren't they?

Chief PETERSON. They were relatively efficient in most cases, but they did not always occur where we needed them. It was basically aimed toward unemployment of the Young Adult Conservation Corps program. Therefore, we tended to have heavy programs in the East, and lighter programs in the West because the population is mostly in the East.

The CHAIRMAN. Was there nothing that required that?

Chief PETERSON. No, no.

The CHAIRMAN. We didn't say you can have the YCC or YACC within 100 miles of their residence. Was there such a requirement in the statute?

Chief PETERSON. Are you talking about YCC now?

The CHAIRMAN. Either one.

Chief PETERSON. In both cases we were supposed to look at the population of unemployed youth.

The CHAIRMAN. In terms of the hiring, but not in terms of where they work.

Chief PETERSON. For residential we could move them, but for nonresidential you had to almost use them in the area where they live. No. What we are trying to say here is that when you add YACC and YCC together which were very large programs, YACC particularly, we are trying to offset a portion of this. This is much less dollars than was in the combination of YACC and YCC.

The CHAIRMAN. Your share of the YCC was what, $18 million and the highest funding last year was between $1 and $3 million?

Chief PETERSON. Currently it is actually just using some of our already appropriated funds that are for that kind of a program. There was no separate funding.

The CHAIRMAN. Do you not have a direction of not less than $1 or more than $3 million?

Chief PETERSON. That is correct. Now YACC ran considerably over $100 million.

The CHAIRMAN. At its peak.

Chief PETERSON. At its peak, and much of that was directed toward recreation, so this will not restore the full amount of effort that those crews put in recreation.

The CHAIRMAN. I am still intrigued by a chart that shows one function share as beinq zero.

Chief PETERSON. I think we talked about it yesterday in fact, Mr. Chairman, that the Congress gave us direction to continue YCC at $1 to $3 million level this year, and we thought we shouldn't just exclude it from the chart because we have given the direction to show that we are proposing zero.

The CHAIRMAN. Senator Melcher.

Senator MELCHER. Thank you, Mr. Chairman. I notice that the estimated receipts in the testimony is $1.6 billion for timber sales.

What are the total estimated receipts for the Forest Service during fiscal year 1983?

Mr. MACCLEERY. Just over $2 billion.

Senator MELCHER. Just over two?

Mr. MACCLEERY. Yes.

Senator MELCHER. In other words, there would be outlays of a little more than $100 million over estimated receipts?

Mr. MACCLEERY. That is correct.

Senator MELCHER. Now of that $300-some million estimated income, or estimated receipts, what does that amount to, principally grazing permits and oil and gas receipts?

Mr. MACCLEERY. The difference?

Senator MELCHER. There is $1.6 billion in timber sales, and you get up to a little over $2 billion, so there is $300 million.

Mr. MACCLEERY. Oil and gas is a large one. There is over $200 million estimated there. Minerals is around a $100 million. Recreation is around $40 million, about $50 million.

Senator MELCHER. No estimate for grazing receipts?

Mr. MACCLEERY. OK. I don't have it on the information I have right here. We can certainly provide it.

Chief PETERSON. It is somewhere around $9 million or $11 million.

Senator MELCHER. The supervisor of the Custer National Forest told me recently that he gets $5 million for total costs of the Custer National Forest per year, and he takes in $45 million, which is about a net cost balance of $40 million, mostly off oil and gas receipts.

It seems odd to me that if one national forest can take in close to $40 million in receipts from oil and gas that the total isn't more for oil and gas receipts for the whole system.

Can you explain that to me?

Mr. LEISZ. Senator Melcher, that figure for receipts does not include the receipts that the Department of Interior takes in from mineral leases on the national forests. That would include coal, oil and gas, and that would be around another $130 million.

Senator MELCHER. There wouldn't be much coal, would there?

Mr. **Leisz**. We do have quite a few coal leases now, particularly in Utah, Colorado, and in Wyoming.

Senator **Melcher**. You are not allowed to strip mine in a national forest.

Mr. **Leisz**. We do have. For instance, last year there was a coal lease in Utah that brought a bid of $12 million, and that is all underground mining, coal mining.

Senator **Melcher**. I understand. Well, then if we add in what is included in the leases that the Department of Interior receives, we could come out with a positive balance of receipts then for the Forest Service during the fiscal year, is that correct?

Mr. **Leisz**. That is correct.

Senator **Melcher**. Then it gets me to a couple of points. You are not meeting the RPA goal by far in a lot of areas, and while your testimony, Mr. MacCleery, is going to the point of reforestation, to try to meet a goal of reforestation by 1985, the Congress set earlier, it seems to me that we are continually bogged down and never coming close to that goal in any particular year; $206 million is the current appropriation, $206 million for this fiscal year, and then $211 million for fiscal year 1983, which is actually a cutback if we figure in a rate of inflation as the President's budget does of about 7 percent. To hold at that figure, it would have to be in excess of $211 million, so we are continually not only missing the goal of the RPA, we are continually dwindling. This is another year of dwindling on reforestation efforts, and I don't think your reforestation figures on what should be reforested includes the dead timber stands that are just sitting there getting worse and not of any value for recreation, wildlife—deteriorating in timber values, and getting down to just the fire hazard and nothing else but a mess.

What can we do about that?

Mr. **MacCleery**. Well, as you know, the receipts from the timber sale, reforestation required as a result of timber sales, is covered by deposits, and so those are not a problem. What we are talking about are additional reforestation needs resulting from fires or insects, mountain pine beetles.

Senator **Melcher**. That is exactly what I am talking about, the dead trees sitting there because they are dead because of the bark beetle infestation of several years ago which should be removed, first of all, and then reforested, and I don't think your figures show that as part of the RPA goal for reforestation, do they?

Mr. **MacCleery**. Well, the goal for reforestation is being developed as part of the land management plan being developed on a forest-by-forest basis right now. In this forest planning process, they will take a look at the situation, reforestation needs, economics, the multiple use conflicts, and develop a goal for reforestation as well as the goal for other uses on the national forests. From that we will provide the foundation and data upon which we can assess what reforestation needs are actually going to exist and what the return benefits from those are likely to be.

Senator **Melcher**. If you will think back into the middle 1970's, Mr. MacCleery, you will recall that we felt, when you were in a different position, we felt a lot of the reforestation figures were just pencil figures, that the reforestation required had been reduced by pencil rather than by actually reforesting them, and you also recall that we are talking about the same problem we talked about this morning when you talked about the bark beetle infested trees are needed to be salvaged, and the only difference now is that they are deader than they were back in the 1970's, and yet there is no recognition that I can find in this budget that lists those areas. Forget about the fact that they have been dead longer than the time when we were enacting the 1976 act. We are talking about trees that have been dead for 10 years in many instances, and all it is is a mess of down timber, a few trees standing yet, and that are dead anyway, and I don't think those millions of acres or hundreds of thousands of acres—I better correct myself, it's bad enough without exaggerating—those hundreds of thousands of acres of dead trees are not included in the reforestation plans, or in the reforest- ation figures you carry on the books.

Mr. MacCleery. I believe that they are, but I will have to go back and find out just how those acres that have been deported as a result of the mountain pine beetle are carried and whether they are included in the inventory. According to our own inventory, there are just over a million acres in need of reforestation. Part of this is backlog and part of it is current needs that have occurred since 1975.

Senator Melcher. Well, my point is that I don't think they are, but I would like to see your inventory and I just don't believe we can wait for the Gallatin and Targhee and the other individual forest plans to address this problem. I think perhaps if we would look at road construction money you have some opportunity–I don't see where you are going to make all these timber sales in 1983. I hope your testimony is correct that we are witnessing a big turnaround in the economy and that the inventory, vast inventory of forest products is absorbed and there is a need for these increased timber sales, that things are looking better for the people that depend upon a job in the forest products industry, but looking at your figures, you have got a tremendous amount of money in there for roads, and to be also matched by the companies that get the bids on the timber sales.

Aren't we going to decrease the expenditure per road per mile greatly? That has been our goal for a number of years. When does that start to take effect in a budgetary way?

Mr. MacCleery. Well, we are certainly moving in that direction, as I mentioned in my testimony. We are having the Forest Service take a close look at ways to reduce design standards and allow the designer roads to lay on the land and reduce maintenance costs. We are getting into roadless areas that have been in limbo for so long, that have not been entered. If we are going to continue to manage these lands in a multiple use manner, we have to have access to these lands. Some of the deferred investments that would have been made in the past years are coming back to face us now because of the need to access these areas.

Senator Melcher. Are you saying there will be more miles of road built per 1,000 board feet?

Mr. MacCleery. That is correct, as we move into these areas. Hopefully there will be more miles per dollar built as well, as we improve efficiency.

Senator **Melcher**. Well, it is my understanding that the region 1 has a proposal now that would at least reduce the cost of roads 30 percent. Private industry tells me in the same area that their roads are costing them 50 percent per mile of the Forest Service roads, and everybody seems to think their roads are adequate, the private industry roads in the same area.

Mr. **MacCleery**. I am very sensitive to that, and the Forest Service is going to be taking a close look at ways to improve efficiency along those lines.

On the reforestation question that you had, I will go back and get some figures as to what is in this inventory. There is a difference here as to actual acres physically without trees and those which can be economically reforested. I will try to get some figures on both of those categories to the extent that I can.

[Subsequent to the hearing the Department of Agriculture supplied the following:]

REFORESTATION BACKLOG

Acres by Region as of October 1, 1981

REGION	Total Acres	To be Reforested by 1985	Not Feasible to Do by 10/01/85
1	193,078	102,768	90,310
2	-24,616	7,609	17,007
3	52,867	36,063	16,804
4	41,194	12,438	28,756
5	37,356	20,204	17,152
6	60,646	27,682	32,964
8	1,312	1,230	82
9	471	471	0
10	1,754	1,442	312
Total	413,294	209,907	203,387

The reforestation backlog was determined as of October 1, 1975. The Congress directed that it be eliminated by October 1, 1985. The backlog of reforestation was defined as the total area of land that had been deforested or was lacking sufficient numbers of trees to be managed as a future stand. All types of deforested land were included in this inventory including bug-killed areas. The Forest Service has maintained a reforestation program level that will eliminate all of the feasible backlog by October 1985. Of the remaining 413,294 acres of backlog as shown in the above table, 209,907 acres will be reforested. The remaining 203,387 acres are not presently feasible to reforest due to the lack of access, incomplete land management plans (RARE II Area Classification), restrictions on the uses of herbicides, economics, and other factors.

The current reforestation process requires proper site preparation measures to remove existing brush and other competing vegetation, the growing of prescribed tree seedlings or the selection and treatment of the proper tree seeds, and the planting or seeding of the areas. The final step in the process is the properly timed certification that the area has been successfully reforested with a sufficient number of trees.

All lands that have been deforested since 1975 due to timber harvest activities, fires, storms, insect and disease damage, etc., are added to the current inventory of acreage needing reforestation. We estimate that this acreage after the backlog has been eliminated, to level off to about 1,000,000 acres with a continuing reforestation program at approximately 400,000 acres per year.

Senator **MELCHER**. I can make the point that I don't think there is any economics involved in these thousands of acres where the stand is just dead. I don't think there is any economic recovery that is of any consequence. I think it is just a question of whether or not the dead timber gets off of there on a subsidized basis and then reforestation can be attempted.

Mr. **MACCLEERY**. In terms of getting the trees back, you have to look at the economics of planting versus natural regeneration. That is something that has got to be—it may be if it is a very low site, more efficient just to let nature regenerate it rather than put the investments in. This is something that we need to take a close look at.

Senator **MELCHER**. Just one final question, in regard to the leasing policy for oil and gas, what do you mean when you are talking about pilot programs? Are you talking about specific leases in a specific area?

Chief **PETERSON**. Yes. We are talking about using it in areas where it is not an existing wilderness. It is not on the other end of the scale.

Senator **MELCHER**. You would have some particular areas in mind?

Chief **PETERSON**. Yes.

Senator **MELCHER**. Which ones?

Chief **PETERSON**. We would like to use some areas throughout the United States, and we would like to use some areas where we have discussion with industry and environmental groups and they say yes, this is a good idea.

Senator **MELCHER**. You have no particular area that you can identify by State?

Chief **PETERSON**. Not at this point.

Senator **MELCHER**. Not at this point.

Thank you very much.

The **CHAIRMAN**. Thank you, Senator Melcher.

Senator Murkowski.

Senator **MURKOWSKI**. Thank you, Mr. Chairman. Gentlemen, you seem to be holding up well under the bright lights. I guess that's called a Washington, D.C., suntan.

I noted your reference to leasing will be processed to accommodate some backlog of 27,000 to 30,000 applications. It is my understanding that particularly on the west coast—in Oregon, to some degree in Washington, and perhaps in California—there has been and continues to be a significant inability to process geothermal leases.

In view of the concern that we have for alternate energy sources, I am wondering if you could elaborate, for the record, how you intend to streamline the process and formulate what the Forest Service policy is toward encouraging or for that matter allowing the accumulation of leases so that there are enough to attract the private sector to go in and do the necessary exploration to prove out the economics associated with geothermal?

Chief **PETERSON**. Sir, we will do that. I might just give you a summary report. We have reduced the backlog of lease operating plans by about 40 percent in this last year. In other words, we had a backlog of somewhere around 10,000, and we have reduced that by about 40 percent. It is our intent to reduce that backlog about that much additional this next year so that we will be current.

Now, we have specifically issued some geothermal permits, and we will give you a summary. There is drilling underway at Mount Hood, for example, in Oregon. There are wells being drilled in California at the present time. There is a big argument about whether we should issue the geothermal permit next to Lassin Park, because there is concern about whether that is connected with the park system. We are trying to get some kind of technical assurance, and there we might decide to use a contingent right stipulation so as to make it clear if a person drilled there and was going to take all the steam out of Lassin, he couldn't go ahead and do it.

Senator **MURKOWSKI**. Is it a fair statement then to say that with this expedited policy of processing, it is a policy of the Forest Service to encourage say exploration at least of geothermal potential in those areas of the national forest lands outside of parks for the sake of expediting this development?

Chief **PETERSON**. Yes, very definitely.

Senator **MURKOWSKI**. Is that going out to those in the field who are in the position of processing and expediting as a policy matter?

Mr. **MACCLEERY**. As a policy matter, that is true. We have made it clear that we want to remove paperwork roadblocks to expeditious exploration for all types of energy, recognizing that development must be compatible with the other multiple uses for which the national forests have been established.

Senator **MURKOWSKI**. I'm sure a lot of people will be gratified to hear the comment with regard to the reduction of paperwork associated with these leases because I gather it has been a bit of a problem.

Chief **PETERSON**. Yes.

Senator **MURKOWSKI**. I have another question that I would like to perhaps generalize on a moment and then hear your comments.

I noted several references to the likelihood that you anticipate increases in revenues produced by timber sales in your current budget projections. My question is, with your research budget, which evidently has been directed for the most part to the scientific aspects associated with your area of responsibility, I wonder if it might not be appropriate to consider some of that research budget going into problems associated with marketing timber in our country. Because of the condition of the National Forest Service lands as well as the condition of the industry as a whole, it strikes me that we have had some lack of flexibility in our policies as compared to perhaps our neighbors to the north in Canada. I am not conversant on what share of the market Canada presently has, but I gather that in the economic slump that we are presently in, while overall sales have declined, there is a significant market share maintained by Canada, and it may be a greater share percentagewise of what the available market is than it was previously. If you don't have this information readily available could you please provide it for the record?

My concern is whether or not our stumpage policies are flexible at a time when we have a declining market in comparison to the Canadians. It is my understanding they move their stumpage fees to correspond with the marketing conditions, and at a time when the timber industry as a whole, not only the logging industry, but those that are involved in the sawmills and other related forest product industries, are at a substantial decline and low point, why would it not be expeditious of the Forest Service research arm to begin to look at how you market and encourage the stability in the industry when we have a downturn like this. Is it practical to consider some new approaches to allow for these gyrations because obviously it works with Canada?

Mr. MacCleery. Yes. You are correct in your statement that the Canadians have increased their market share during the last couple of years when the market has been down. We can provide you with the figures if you would like.

[Subsequent to the hearing the Department of Agriculture supplied the following:]

CANADIAN LUMBER MARKET

The Canadian share of the U.S. softwood lumber market has increased from 18 percent in 1975 to 30 percent in 1981, as shown in the attached chart. A number of causes have been suggested including changes in the Canadian-U.S. exchange rate, lower Canadian stumpage prices, and higher U.S. shipping rates. The International Trade Commission is presently reviewing these and other suggested causes, and based on their conclusion, should propose solutions, if they are warranted. The Forest Service has a research work unit at Portland, Oregon, which is also investigating factors affecting Canadian softwood lumber trade and prices. The results of this research will be used in the next Resource Planning Act Assessment.

Stumpage rates are established on Forest Service timber sales through the competitive bidding process. Stumpage rates are fixed during the life of the sale on "flat rate" sales while on stumpage rate adjustment sales, rates are adjusted quarterly and the new rates are applied to the proceeding quarter. If a purchaser used poor judgement and bid a sale too high, the rates may never be low enough to economically operate the sale.

U.S. softwood lumber production, imports, exports, and apparent consumption, 1970-81 (million board feet)

Year	U.S. production	Imports		Exports		U.S. apparent Consumption
		Total	From Canada	Total	To Canada	
1970	27,530	5,778	5,722	1,115	203	32,193
1971	30,039	7,232	7,172	933	206	36,338
1972	30,975	8,985	8,878	1,191	290	38,769
1973	31,586	9,020	8,844	1,753	388	38,853
1974	27,704	6,821	6,732	1,566	382	32,959
1975	26,747	5,724	5,677	1,405	397	31,066
1976	29,878	7,959	7,913	1,606	438	36,231
1977	31,203	10,370	10,327	1,428	366	40,145
1978	31,273	11,853	11,777	1,354	374	41,772
1979	30,411	11,153	11,101	1,781	428	39,783
1980 1/	24,335	9,573	9,546	2,007	388	31,901
1981 1/	22,710	9,029	9,008	1,861	495	29,878

1/ Preliminary.

Sources: Production--U.S. Department Commerce 1970-79, National Forest Products Association 1980-81. Imports and Exports, U.S. Department of Commerce.

Mr. MacCleery. We are concerned about this, and the ability of purchasers and of the national forest timber to be responsive to the market. We have proposed some changes in timber sale contracting procedures which will deal with that. One of the proposals is to institute a stumpage rate adjustment on the west side of Oregon which in the current situation both sales are flat rate. They do not move up and down with the market.

Everywhere outside of the west side of Oregon the national forest timber is on an adjusted basis where stumpage moves up and down with the market. These areas have not had the problems to the extent that the west side of Oregon has.

The problem is not just because of the stumpage rate adjustment issue. Many of these sales that are in the flat rate areas are the first to go off when the market goes down and the last to come back on when the market recovers, and we are in the process of getting comments from the industry and the public. Some of the other procedural changes are also designed to make the timber more market responsive such as discounts for early removal of a sale to encourage more expeditious management, and to encourage bids which anticipate moving the timber in an expeditious manner rather than betting that the market is going to go up and then be caught in the squeeze like we are now.

[Subsequent to the hearing the Department of Agriculture supplied the following:]

STUMPAGE RATE REDETERMINATION POLICY

Stumpage rate adjustments timber sale contracts are in effect in all areas of the Western United States except in western Oregon and Washington. Stumpage rate adjustments permits the price paid for National Forest timber to fluctuate, within stated limits, in response to established lumber market indices. In the early 1970's, stumpage rate adjustment sales were dropped in favor of "flat rate sales" in western Oregon and Washington. Stumpage rates are fixed throughout the sale term on these sales.

Senator Murkowski. I think we can continue, Mr. MacCleery. You indicated that there has been a significant market share that the Canadians have gained during this period—a soft market—and the soft market has been around for some time, but why is the delay time so extraordinarily long between the market downtrend and any stumpage rate adjustment?

You indicated that you are looking at it now, but we have been in this downtrend for a long period of time. I think we need to be more responsive, don't you, so the industry can share the benefits without such extended time frames as we are now in?

Mr. MacCleery. Well, the industry itself is very divided, as you well know, as to what the proper approach ought to be, and the periodic cycles in the market are common. It is a normal 4-year cycle. It is something that industry has come to expect.

This latest market downturn has been much more extended than normal. It has only been in the last year or so that it has been recognized as an unusual situation in terms of market cycles.

Senator **Murkowski**. But we are still involved now in trying to resolve what we are going to do about stumpage rates to offset the economic decline. We have seen more impact when the Canadians come into this market. Why do we take so long to respond?

Mr. **MacCleery**. We do have stumpage rate adjustments in all other areas other than the west side of Oregon. There is a substantial buying of timber in southwest Oregon, and stumpages, though, are in flat-rate areas. They have been flat-rate areas, because the industry strongly supported that and opposed any change. Even now there is opposition within the industry to changing from flat rates.

What we are dealing with are buyings of timber that have been bid in past years, and the problem is with contracts that were bid 1 year, or 2, or 3 years ago.

Senator **Murkowski**. My point is that your contracts have a definite date established for assessment of whatever the stumpage will be, is that not correct? If it is a 3-year contract, at the end of the 3-year term there is a renegotiation on stumpage, is that not correct?

Mr. **MacCleery**. There is a rate for determination after the sale is terminated or extended.

Senator **Murkowski**. My point is that there is no opportunity during a period of economic downturn to go in at the request of the holder and adjust the rate to reflect the economic conditions at any given time? It is always on an anniversary or a specific date, is it not, or after 2 years?

Mr. **MacCleery**. The contracts outside of the west side of Oregon have adjustment that is based on a quarterly index of end-product prices which goes up and down with the market, and stumpage prices are adjusted according to that index.

Senator **Murkowski**. What time period does that follow?

Mr. **MacCleery**. Stumpage value is adjusted quarterly.

The **Chairman**. But that applies to the new sales, not the old contracts?

Mr. **MacCleery**. No. This applies to all existing contracts except for those in the west side of Oregon.

Senator **Murkowski**. Does the industry indicate that they are satisfied that this is timely in following the market decline?

Mr. **MacCleery**. The industry, yes, have been satisfied with the stumpage rate adjustment provisions in their existing contracts.

Senator **Murkowski**. I don't want to pursue the question. In our State, as you know, we have 50-year timber contracts that are renewable every 5 years. Although it is a different set of circumstances, however, if you have a 5-year contract and the stumpage is set at whatever it might be and we go into an economic decline—my point is that I think it is time that the Forest Service begin to look in their research capability at some of the economic factors associated with the market. As you have indicated, the Canadians have come in with a bigger market share during our economic downtrend, and that is unfortunate. I think we have to have a higher degree of flexibility to counteract that. I recognize that there are different types of contracts and different types of stipulations, but the fact remains we have been unable to respond to a greater market share going outside our Nation at a time when we have an economic decline in the timber industry, and I think that is indeed unfortunate.

Mr. Chairman, I have one other question that I would like to pose, and it is relative to our own State of Alaska. It is my understanding that in general, in 1978, we were cutting about 520 million board feet of timber a year. I think that is about the peak. At the present time, we are down somewhere in the area of less than 420,000, and I think our allowable cut has been established at 420,000 or 420 million board feet a year.

My question is, can you provide that portion of the overall Forest Service budget in dollars for the current fiscal year in Alaska vis-a-vis the number of Forest Service personnel and the same set of figures for the year of 1978 when we had an alltime high cut?

I recognize there are certain circumstances that have occurred in the Alaska Native Land Claims Settlement and the Alaska Land Act, and that those have put additional requirements on the Forest Service in Alaska to make more timber available in less accessible areas which has increased the cost dramatically. However I am just trying to get a comparison here. If it is available I would appreciate it, Mr. Chairman.

Chief PETERSON. Let me give you a couple of numbers. The correct figure is 4,500 million feet per decade which averages out to 450 million feet per year which is the allowable cut in Alaska for the Tongass Forest. There is a small amount in addition for the Chugash. We will have to supply you with a comparison with that peak year.

Senator MURKOWSKI. If you give me the 1978 budget in Alaska in personnel, and 1983 budget personnel for Alaska, I would appreciate it.

My parting observation is I would share——

The CHAIRMAN. Could I interject the point that when that information is provided, it will be made a part of the record.

[Subsequent to the hearing the Department of Agriculture supplied the following:]

ALASKA

The total appropriated funds for the management of the National Forests in Alaska for FY 1978 were $48,300,000. These funds were in part used to prepare and offer 563.4 million board feet of timber sales, including timber support work and road development (excluding purchaser credit). The total staff for the Alaska Region was 790 FTEs for 1978.

The FY 1983 total budget for the Alaska Region is $77,383,200 (excluding purchaser credit), to be used in part to prepare and offer 490 million board feet. The total staff for the Region in 1983 will be 931 FTEs. This is down 4 percent from the 1982 figure of 970 FTEs.

With the passage of P.L. 96-487, the Alaska Lands Act of 1979, Section 705a specifies that with the wilderness designations, management prescriptions and other changes in the available land base the volume of National Forest timber sale offers must be reduced. The specific volume that the National Forests in Alaska will prepare and offer is 4.5 billion board feet over the next 10 years. The annual offer level will have to be scaled down gradually from 563 million board feet in FY 1978 to less than 450 million board feet in the latter part of the 10-year period. This will reflect increased timber supplies from new landowners in Southeast Alaska. The reduction of timber sales will continue to have a direct bearing upon the staffing pattern for the Alaska Region.

The transfer of lands under terms of the Alaska Native Claims settlement, the increased needs for boundary line determination, increased mineral management, intensification of wilderness management and the intensification of timber management and related activities have greatly increased the staffing needs for the National Forests in Alaska. After the initial build up of technical staffs, the Regional Forester has started reorganization efforts to more efficiently manage these programs in order to stay within the present economic constraints. Staffing needs have been reduced as shown by the 4 percent reduction from FY 1982 to FY 1983.

Senator MURKOWSKI. In the comments that have been discussed regarding roads and cost of roads, I think I have indicated to you, Max, my observation that in most cases the logger is going to build his roads up to a certain standard in order to maintain his equipment. This protects the equity they have built up in the equipment when they are through with a job at any given time. They don't make that much logging. The engineering requirements are certainly an obligation of the Forest Service, but it has been my observation, and I am not an engineer by any means, that in many cases these roads are not designed as permanent roads. After the timber is cut in an area, culverts are taken out and the land goes back to its natural state.

This isn't true with the permanent roads, however. These roads are built for maintenance. I am wondering, and would ask that you again examine your policies of building roads, which appear to be quite costly. This is a result of specifications which you established by your engineers in the realization that oftentimes the logger is going to build a road that will carry his equipment safely. And I wonder if anything more is necessary for those areas where those roads could be of a temporary nature?

Chief PETERSON. Mr. Chairman, if I could address that, we have reviewed road design standards, construction in Alaska, the last 2 years. The primary problem in Alaska relates to fish passage and fish rearing in those upstream small streams.

Contrary to what happened in California, Oregon, and the lower 48, the water stays high all the way up into the upper headwaters of those streams. That is the nursing area for small fry, so that is the reason culverts are used in temporary roads. We have tried to be sure that it is not an engineering question really as far as the standard. It is really what is needed to protect the salmon, and we have been experimenting with some different ways of doing that construction and reducing the cost.

Also several of the companies now are getting equipment, that cable system, that can reach further requiring a lot less road. That is one of the very good answers in that particular part of the country because of the large number of streams, but we will continue to conduct reviews.

I might point out that I have received a series of letters in the last 6 months complaining, though, that we have lowered the standard too much. The loggers claim that we are tearing up their equipment. We are not providing enough rock and so on.

Senator MURKOWSKI. They want another contract for the road, maybe?

Chief PETERSON. When you are getting complaints from both sides you figure maybe you are getting close to right.

Senator MURKOWSKI. Mr. Chairman, I thank the witnesses.

The CHAIRMAN. Senator Warner.

Senator WARNER. Recognizing the Chair's desire to move on to the next witness, I am going to yield back part of my time to expedite the hearing, but I do want to ask you a question. I am very partial to your work. My first job in 1943 was with the U.S. Forest Service.

The CHAIRMAN. In the State of Idaho.

Senator WARNER. Clearwater—two questions; one, your title is Assistant Secretary for Natural Resources and Environment, and I didn't see any section as such in your opening statement. It was sort of categorized under the question of environment. I perhaps suggest maybe hereafter you begin to emphasize that a little more in your statement.

Coming to the two questions under that subject—first, as we proceed to examine the Clean Air Act—are you participating in the intergovernmental deliberations and are you satisfied to date that the drift toward deregulations in that area will be sufficient so as not to reduce the quality of our national forests?

Mr. MACCLEERY. We have been participating in that. I have not personally been involved in the discussions up to now.

Senator WARNER. Is there someone else who is looking after the national forest interest as we examine the Clean Air Act?

Mr. MACCLEERY. We have a group, technical group, working with the people that are dealing with that issue on the technical aspects. It has not come to our office at my level up to now.

Senator WARNER. Then does your colleague wish to comment?

Chief PETERSON. I might add that we have a technical person on that group. Part of the things that they are using in that is the research and development transport models and various kinds that resulted in Macon, Ga., on how smoke and other kinds of things are transported. It is still at that technical level now of looking at what happened under different kinds of approaches.

Senator WARNER. I know this is an issue in my State because of the proximity of some national forests. It is a subject that I am very much interested in.

Chief PETERSON. There is also a doubling of acid rain research.

Senator WARNER. I saw that you doubled the budget for that. In your judgment, is there any progress being made in that area in trying to determine the causes?

Chief PETERSON. Yes; I think we are. There is a great deal of additional monitoring and some very basic kind of research that we need to complete to really find out what happens. In some places the acid appears to be beneficial. In other places it may change the soil structure or the way that the tree gets food. We don't fully understand yet, so a lot of the conversation that is going on in acid rain is without really understanding what is happening in different places.

We have been involved in acid rain now for about 10 years, including several monitoring stations, and we intend to intensify that this coming year.

Senator WARNER. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, and I appreciate your testimony. There may be questions submitted to you for response in writing. I would hope you would have the material back to us by the end of next week if the questions are submitted promptly so that we can incorporate them in the record before we have to make our submission to the Budget Committee on March 15.[1]

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[1] See app. II, p. 441, for responses to additional committee questions.

Senator **Warner**. Mr. Chairman, I would ask the witnesses, I hope to put in the record some assessment of their technical group on this issue of the Clean Air Act and the national forests.

[Subsequent to the hearing the Department of Agriculture supplied the following:]

CLEAN AIR ACT

The Forest Service is affected in two major ways by the Clean Air Act. First, we are required to comply with procedural and substantive requirements of Federal, State, interstate, and local air pollution laws to the same extent as any non-government entity. Many of the activities we undertake on the National Forests emit regulated pollutants. For example, our use of fire results in the short-term emission of pollutants that can affect air quality over large areas. In several regions of the country, we are a party to formal smoke management plans operated by State agencies. These plans coordinate the amount of material burned based on meteorological conditions and weather forecasts so that impacts on air quality are minimized.

We have several research efforts underway that will help us in this job. Forest Service scientists are working to develop better knowledge of the constituents of smoke, how they vary by fuel type and what happens to them in the atmosphere. Forest Service scientists are also working to develop ways to better utilize material that is presently being burned. Better utilization of logging residues can assist in reducing the impact of prescribed fire on air quality while providing additional fiber to meet the Nation's long-term increased demand for wood products.

The second major way in which the Forest Service is affected by the Clean Air Act derives from the Prevention of Significant Deterioration (PSD) part of the Act, one purpose of which is to preserve, protect, and enhance the air quality in national parks, national wilderness areas, etc. The 156 mandatory class I Federal areas established by the Act receive special protection from air quality degradation and federal land managers are assigned an affirmative responsibility to protect the air quality related values (including visibility) of those areas. The Forest Service manages 88 of the 156 class I areas and consequently has specific tasks to perform. Our role is to represent the national interest in those lands we manage to the regulatory authorities be they at the national, State, or local level. Of most significance to us is the new source permitting process in which we are to consider whether a new source will have an adverse impact on the air quality related values (including visibility) of a class I Federal area.

Although many of our class I areas are located in parts of the country facing extensive energy developments, we have been unable, because of budget constraints, to devote more than token a effort toward fulfilling our class I area responsibility. As a consequence, new major emitting facilities are being permitted without professional review and input by the Forest Service concerning impacts on national Forest areas.

The **Chairman**. Thank you very much.

Chief **Peterson**. Thank you, Mr. Chairman.

The **Chairman**. The next witness is the Honorable Edward E. Noble, Chairman of the Board of the U.S. Synthetic Fuels Corporation, accompanied by Mr. Victor A. Schroeder, President, U.S. Synthetic Fuels Corporation, and Mr. Dwight Ink, Vice President for Administration of the U.S. Synthetic Fuels Corporation.

Welcome before the committee again, Mr. Noble. We are pleased to have you here today. We look forward to your testimony.

STATEMENT OF HON. EDWARD E. NOBLE, CHAIRMAN OF THE BOARD, U.S. SYNTHETIC FUELS CORPORATION; ACCOMPANIED BY VICTOR A. SCHROEDER, PRESIDENT, U.S. SYNTHETIC FUELS CORPORATION; AND DWIGHT INK, VICE PRESIDENT FOR ADMINISTRATION, U.S. SYNTHETIC FUELS CORPORATION

Mr. **Noble**. Thank you, Mr. Chairman. This is Mr. Schroeder on my right and Mr. Ink on my left, as you introduced them.

If you prefer, I have a short statement, but if you prefer in the interest of time to go directly to the questions, I could submit this to the record.

The **Chairman**. If that is satisfactory with you, it would be fine with me.

Mr. **Noble**. All right, sir.

The **Chairman**. Your statement will appear in full in the record together with the tables. We can't put the diagram in the record so easily, but we can put the table in the record.

Mr. **Noble**. I will submit here a statement of the administrative expenses.

The **Chairman**. We will receive the statement of administrative expenses and the staff will make the determination which portions are to be included in the record and which portions are to be included in the file. We will at least get the summaries in the record.

[The prepared statement and attachments submitted by Mr. Noble follow. Testimony continues on p. 423.]

STATEMENT OF

EDWARD E. NOBLE
CHAIRMAN OF THE BOARD
U.S. SYNTHETIC FUELS CORPORATION

BEFORE THE
SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES

FEBRUARY 10, 1982

Mr. Chairman, Members of the Committee: It is indeed a pleasure to have the opportunity to testify this morning. When I first appeared before this Committee nine months ago at my confirmation hearing, I set out certain views and directions I saw as important for the Synthetic Fuels Corporation. Today I would like to sketch briefly for you how we have moved to implement those views and policies.

The Corporation is the catalyst for speeding development of a privately held, privately managed and, I hope, economically viable synthetic fuels industry. If we can develop alternative fuels at some competitive constant dollar value, then these fuels will make a helpful contribution to the overall energy supply. More importantly, we will have put in place the technology, know-how, and infrastructure necessary for private industry to move aggressively and efficiently to expand synthetic fuel production as the marketplace dictates.

If you consider the fact that more than 90 percent of our country's fossil fuel reserves are coal and oil shale, and if we have developed the capability and infrastructure for converting them into liquids and gas, then we will indeed give the OPEC cartel and other exporting nations pause when considering any further arbitrary increase in oil prices. I have described such a synthetic fuels capability as a sort of "club under the table," and it could serve us well.

For these strategic reasons as well as the long lead time, tremendous capital resources, and great risks associated with developing pioneer plants, there is an initial role for the government to play. Our goal is to use the Corporation's financial incentives to get a diversified industry producing as rapidly as possible, at the least cost to taxpayers and with the least disruption to capital markets.

Last May I promised this Committee that, if confirmed, I would run a tight, competent operation directed toward projects. I am happy to report to you this morning that the Corporation has had a project matrix organization in place since October. This structures staff activity around the projects and allows close coordination and efficient interaction among the various disciplines necessary for effective project evaluation, negotiation, and monitoring.

I also promised you I'd establish effective communication with all those outside the Corporation who have an interest in our activities. Toward this end I have appeared in open session before committees of the Congress four times to date, and I have met with members privately or in small groups on many other occasions. Mr. Schroeder and I have had numerous meetings with industry and labor leaders, and we have held discussions with state and local officials, with environmental representatives and with various other interested parties. The other members of the Board have been similarly active. In addition, the Board made a deliberate decision to hold its first three meetings in geographically distinct areas and we made an effort to visit informally with local officials and citizens in both Utah and Tennessee.

Administrative costs were another concern of mine in earlier testimony. I pledged to keep them to a minimum, and I am pleased to be able to tell you that for fiscal year 1982 our operating budget is just under 50 percent of the allowed total. Even for fiscal year 1983, when the Corporation will be fully staffed and operating at capacity, we still anticipate our operating budget will be something less than 65 percent of the total permitted by law and our professional staff will number just about 200 persons rather than the 300 permitted by the Act. I would stress, however, that our ability to manage the Corporation with this small number of people will depend heavily on our ability to compete in the private marketplace for highly qualified people.

Finally, I gave a commitment to try to assure that all the variables -- financial, technological and environmental -- are equitably considered in the project review process. I believe the maturity and strength criteria for project evaluation which the Board adopted in final form at its December 11, 1981 meeting, as well as the procedures adopted at that time, go far toward ensuring that our evaluation and selection processes are fair and competitive.

I have been asked a number of times how a person who believes in the marketplace could be directing the synthetic fuels program. My answer is that in the longrun the market will do it; but if you want to get the industry started quicker and have some leverage on OPEC now, then some assistance is necessary. Our job is to be sure that assistance is responsible and prudent.

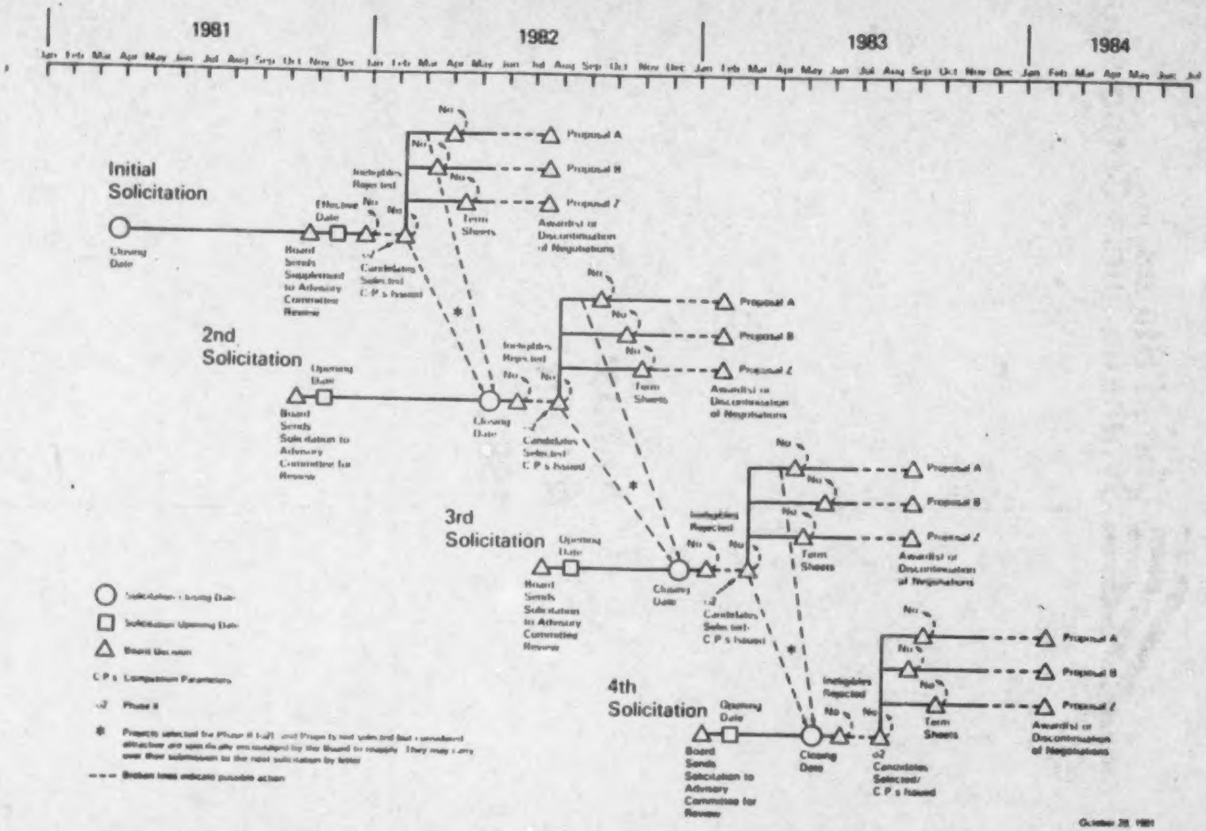
I want to assure you this morning that the Board of Directors and the staff at the Corporation are fully responsive to the mandate of Congress. We are well aware of the Energy Security Act's primary goals of production and diversity. We are sensitive to our responsibility to put at risk only the minimum amount of federal money essential to make a project viable, to assure that credit is not available elsewhere, and to provide assistance in a manner that does not mislead capital markets. We further recognize the need for projects to compete in the evaluation process, to comply with all federal, state, and local environmental and regulatory requirements, and to produce marketable products that contribute to the country's defense security and economic stability.

Again, I thank you for your time and interest this morning. I will be glad to answer any questions you have.

PROJECT NAME	SPONSOR(S)	LOCATION	RESOURCE BASE	PRODUCTION	TYPE OF ASSISTANCE REQUESTED
ALABAMA					
Northern Alabama	North Alabama Coal Gasification Consortium (including Santa Fe International, Kidder Peabody, and Air Products & Chemicals)	Murphy Hill, Alabama	Coal	12,000 BOED	Loan Guarantee and Price Guarantee
CALIFORNIA					
Calsyn	California Synfuels Research Corp.	W. Pittsburgh, CA	Heavy Oil	5,100 B/D	Loan Guarantee
Coolwater	Texaco, Inc., Southern California Edison Co., Electric Power Research Institute, Bechtel Power Corp., General Electric Co., Empire State Electric Energy Research Co., JCWP (a consortium of Japanese companies)	Daggett, CA	Coal	4,300 BOED	Price Guarantee
KENTUCKY					
Breckinridge	Ashland Synthetic Fuels, Inc. Bechtel Petroleum, Inc.	Breckinridge County, KY	Coal	49,800 BOED	Loan Guarantee
CoaLiquid	CoaLiquid, Inc.	Shelbyville, KY	Coal & Oil	1000 B/D	Price Guarantee and Purchase Commitment
NORTH CAROLINA					
First Colony	Peat Methanol Assoc.	Creswell, NC	Peat	1900 BOED	Loan Guarantee and Price Guarantee

PROJECT NAME	SPONSOR(S)	LOCATION	RESOURCE BASE	PRODUCTION	TYPE OF ASSISTANCE REQUESTED
TENNESSEE					
MLGW	Memphis Light, Gas & Water (City of Memphis)	Memphis, TN	Coal	8400 BOED	Price Guarantee and Loan Guarantee
TSA	Tennessee Synfuels Assoc. - a joint venture of Koppers Synfuels Corp. and Citgo Synfuels, Inc.	Oak Ridge, TN	Coal	50,000 BOED	Price Guarantee and Loan Guarantee
UTAH					
Paraho	Paraho Development Corporation	Uintah County, UT	Oil Shale	30,000 B/D	Loan Guarantee and Price Guarantee
WYOMING					
Hampshire	Hampshire Energy - a joint venture of Kaneb Services, Inc., Koppers Co., Inc., Northwestern Mutual Life Insurance Co., Metropolitan Life Insurance Co., Sohio (not requesting SFC assistance)	Gillette, WY	Coal	19,377 B/D gasoline 914 B/D LPG 1,618 B/D mixed Butanes	Price Guarantee and Loan Guarantee
WyCoal	WyCoal, Inc. (A Panhandle Eastern Co.)	Near Douglas, Converse County, WY	Coal	27,000 BOED	Loan Guarantee and Price Guarantee

SOLICITATION PROCEDURES


1981
1982
1983
1984
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Initial Solicitation
Closing Date
Board Sends Supplement to Advisory Committee Review
Effective Date
Ineligibles Rejected
No
Candidates Selected C P s Issued
Term Sheets
Proposal A
Proposal B
Proposal Z
Award(s) or Discontinuation of Negotiations
2nd Solicitation
Opening Date
Board Sends Solicitation to Advisory Committee for Review
Closing Date
3rd Solicitation
4th Solicitation
Solicitation Closing Date
Solicitation Opening Date
Board Decision
C P s Competition Parameters
Phase II
Projects selected for Phase II (…) and Projects not selected but considered attractive are specifically encouraged by the Board to reapply. They may carry over their submission to the next solicitation by letter
Broken lines indicate possible action
October 28, 1981

United States
Synthetic Fuels Corporation

Annual Report 1981

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PREFACE

The first Annual Report of the United States Synthetic Fuels Corporation is submitted to the President and the Congress in compliance with Section 177 of the Energy Security Act (P.L. 96–294). It covers the period October 1, 1980 to September 30, 1981, which comprises the Corporation's first full year of operations. In addition, because the Corporation was without a Board of Directors for much of 1981, this Report carries forward the record of activities from the first meeting of the newly constituted Board on October 28, 1981 through its January 18, 1982 meeting. This is done to reflect the continuity of effort and significant progress made in recent months.

As required by the Act, the following information is included: general description of Corporation activities for the year; description of each project in which the Corporation is involved, as well as status report on each and evaluation of the contribution each might make to the purposes of the Act; description of the overall progress of the Corporation toward meeting the goals of the Act and any recommendations for Congressional actions to facilitate progress; description of actual/potential environmental impacts from synthetic fuels projects; and the Corporation's annual audited financial statements and reports on receipts and compensation.

Additionally, the following material is available either upon request to the Director of Public Disclosure or by visiting the Corporation's Public Reading Room: Guidelines on Disclosure and Confidentiality; Supplement to Initial Solicitation, Second Solicitation, General Solicitation Procedures and Related Timing Resolutions; Policy and Procedure for Administration of Contractual Arrangements; By-Laws; Organization Plan; December 11, 1981 Briefing Materials on Project Maturity and Strength Criteria; January 18, 1982 Briefing Materials on Strategic Matters and Strength Criteria; and Policy on Public Access to Board Meetings.

FROM THE CHAIRMAN

Development of a commercial synthetic fuels industry in the United States is an important step that must be taken now to promote greater energy security in support of the Nation's defense and economy.

The synthetic fuels effort is but one part of a multi-faceted energy program for our country. It can, however, make a significant contribution in the coming years as the Nation moves from our present reliance on finite resources with their limited capacity to a mix of renewable energy sources and technologies which will assure sufficiency. Our country has vast reserves of coal and oil shale as well as significant amounts of tar sands and heavy oils, while conventional domestic supplies of oil and gas are insufficient to meet demand. A producing, economically viable synthetic fuels industry will enable us to convert the energy resources we have into the forms we require.

Development of any new industry is challenging and complex, but synthetic fuels development presents particular difficulties because of the many uncertainties associated with its financing, technology, and regulatory compliance. Financial uncertainties range broadly from plant construction and operating costs to outyear prices to the marketability of products. On the technical side, commercial experience with most of the key processes and technologies necessary for synthesis conversion ranges from limited to virtually nonexistent. Regulatory concerns include potential environmental, health and safety, and socio-economic impacts which must be addressed at every step and carefully monitored as the first plants are built and brought on line.

The purpose of the Corporation is to limit some of the uncertainties by sharing with private sponsors some of the risks inherent in the first commercial projects, thereby promoting increased energy security and decreased vulnerability to the OPEC cartel. Simply put, should OPEC consider excessive or arbitrary price increases in the future, it will have to take into account the work of the Corporation as a strong new hand on the tiller of events.

The vitality of a bountiful America lies in its strong free market economy. In keeping with the traditions of this vitality, the Corporation will provide various forms of financial assistance in support of the best private sector efforts to develop a diversified and economically sound synthetic fuels industry. The private sector must bring creativity, commitment, and substantial capital investment; the Corporation will provide financial risk-sharing.

All in all, progress has been good. The Corporation is substantially through Phase I evaluations of projects received under the Initial Solicitation. We have issued a Second Solicitation and are actively considering others. The Corporation's first awards are expected this summer. I am happy to report that after a somewhat rough start the United States Synthetic Fuels Corporation is now on a steady course. We are working effectively and cooperatively with the private sector toward our goal of improved energy sufficiency, national security, and economic prosperity.

Edward E.

EDWARD E. NOBLE
January 28, 1982

BOARD OF DIRECTORS

Edward E. Noble
53, of Tulsa, Oklahoma. Political affiliation: Republican. Term: seven years. Chairman of the Board, Noble Inns Corporation. Director, Auto Crane Company of Tulsa, Oklahoma. Previous director of Noble Affiliates, an oil-related company. Director of the Hoover Institute and Trustee of the Samuel Roberts Noble Foundation, Inc. of Ardmore, Oklahoma. University of Oklahoma, 1951. SFC position: Chairman of the Board. Confirmed, May 14, 1981; sworn in, May 26, 1981.

Victor Schroeder
60, of Atlanta, Georgia. Political affiliation: Independent. Term: six years. Manager of development for the Atlanta Apparel Mart and executive director of the Peachtree Center for three years. Past president and chief executive officer of Aplomb, Inc., a real estate consulting firm. Also served as senior vice president for development of the Phipps Land Company and president of Resort Properties. Attended Oklahoma State University and was graduated from Officer Candidate School at Fort Benning, Georgia. SFC position: President and Board member. Confirmed, September 11, 1981; sworn in, October 28, 1981.

C. Howard Wilkins
43, of Wichita, Kansas. Political affiliation: Republican. Term: five years. Founder and managing partner of the Maverick Company. Former president of the Pizza Huts of Louisville, Inc. and later president and chairman of the board of Pizza Corporation of America. Served as vice chairman of the board of the Pizza Huts, Inc. Yale University, 1960. SFC position: Board member. Confirmed, September 11, 1981; sworn in, October 28, 1981.

V. M. Thompson, Jr.
57, of Tulsa, Oklahoma. Political affiliation: Democrat. Term: four years. Chairman and chief executive officer of Utica National Bank & Trust and Utica Bankshares Corporation of Tulsa. Previously president and chief executive officer of First National Bank and Trust of Stillwater. Former director of Oklahoma City Branch of the Federal Reserve Bank of Kansas City. University of Oklahoma, 1948. SFC position: Board member. Confirmed, September 11, 1981; sworn in, October 28, 1981.

Robert A. G. Monks
48, of Boston, Massachusetts. Political affiliation: Republican. Term: three years. Since 1975 served as chairman of the board of the Boston Company, Inc. Also former president of the Maine Wood Fuel Company, Ram and Company and C. H. Sprague and Son Company. Held directorships with several coal companies, including Westmoreland, Imperial Smokeless, Winding Gulf and Penn-Virginia. Harvard College, 1954. Harvard Law, 1958. SFC position: Board member. Confirmed, September 11, 1981; sworn in, October 28, 1981.

THE FIRST YEAR

The Energy Security Act (the Act) vests authority and responsibility for the United States Synthetic Fuels Corporation in a seven-member Board of Directors, appointed by the President and confirmed by the Senate. Yet throughout its first year of operation, the Corporation was without a fully constituted Board to direct its activities. In addition, it experienced three distinct periods of management within its first eight months, and it housed its personnel in upwards of a half-dozen separate physical locations during this time.

In October 1980, President Carter used his recess appointment power to give the Corporation its first Board of Directors. This Board began immediately to hire officers and staff to run the Corporation, and it issued the Corporation's first solicitation for proposals on November 21, 1980. Following the 1980 election and subsequent change in Administration, the interim Directors resigned on January 30, 1981.

Before resigning, then-chairman John Sawhill designated the Corporation's senior vice president and general counsel, John McAtee, as Acting Chairman. Mr. McAtee supervised the staff until mid-May 1981. During this period the Corporation's first solicitation closed; the Corporation issued an interim discussion paper on project evaluation procedures and selection criteria and interim guidelines on disclosure and confidentiality; staff members began familiarizing themselves with the projects received under the first solicitation; and other staff began developing and implementing the various structures, procedures and guidelines necessary for the efficient and effective functioning of the Corporation.

On May 14, 1981 Edward E. Noble was confirmed by the Senate as Chairman of the Corporation and sworn into office on May 26. Four additional nominees to the Board of Directors were confirmed on September 11, 1981. They were sworn in on October 28, 1981, and the Board held its initial meeting that day. For the first time since the resignation of the previous Board in January, staff of the Corporation was once again guided by Board decisions and given definitive direction; and the Corporation was already into its second year of operation.

Among the many resolutions considered and decisions taken by the Board of Directors at its October 28 meeting were the following: to approve a policy on public access to meetings of the Board of Directors; to supplement the Initial Solicitation and to issue a Second Solicitation; to adopt competitive procedures for contracting and for the use of consultants; to approve final guidelines on disclosure and confidentiality; to lease office space adequate to locate all personnel within a single building; and to adopt revised by-laws and a plan of organization for the Corporation.

Organization

The organization plan approved by the Board on October 28, 1981 structured the Corporation into a project-matrix system. This required some realignment in senior management and shifted staff more to a projects (versus departmental) orientation. The reorganization divides the Corporation into five major offices, including the Offices of Projects, of General Counsel and Secretary, of Administration and Treasurer, of External Relations, and of the Inspector General; and it also authorizes an Office of Planning to work especially on development of the comprehensive strategy required by the Act.

The project-matrix system draws staff members from all relevant offices and forms them into project-specific teams. Each team thus incorporates and reflects the full range of expertise within the Corporation and insures that every project receives a comprehensive evaluation. Project teams will continue to handle individual projects, from the initial evaluation and selection process into the construction period and through the monitoring of full plant operations.

This project-matrix/team-division structure integrates and focuses Corporation activities directly on the projects. It assures maximum efficiency, with all staff members involved in the Corporation's major work and all activity coordinated toward well-defined goals.

Project Evaluation Process

Since there were no Board-approved evaluation criteria prior to October 28, 1981, proposals received in response to the Initial Solicitation could be given only a preliminary review. In doing this the staff recognized that many proposals contained incomplete information. Thus, in July 1981 the Corporation sent letters to project sponsors requesting additional information as necessary to complete initial evaluations.

Even as the preliminary project reviews were taking place, the Corporation was continuing work to develop specific project evaluation criteria and procedures. This was a cooperative effort involving virtually every office within the Corporation. On April 9, 1981 a set of proposed "Initial Project Selection Guidelines" was released for public review and forty-nine responses were received, divided about equally among project sponsors, various government entities, and interested third parties. These were considered during the drafting of the project evaluation criteria and procedures which were conditionally approved by the Board of Directors on October 28, 1981.

The conditionally approved criteria and procedures were incorporated into the Supplement to the Initial Solicitation[1] and the Second Solicitation which were submitted to the Advisory Committee[2] for review, as required by law. After review and consideration of the Advisory Committee's comments, the Board gave final approval to the Supplement and the Second Solicitation, including the criteria and procedures, on December 11, 1981.

At its January 18, 1982 meeting the Board began deliberations on the 28 projects which had responded to the Corporation's request for additional information by the deadline under the Supplement.

Evaluation Criteria and Procedures

The procedures adopted by the Board direct that proposals received in response to any solicitation undergo a two-phase evaluation process. During Phase I, projects are evaluated against eligibility, maturity, and strength criteria. First, the project is examined for eligibility under the Act. Second, a determination is made as to whether the project is sufficiently mature so that technical and other financial uncertainties are within limits that permit systematic evaluation. Third, the project should be technically and economically viable, with demonstrable markets for its products, regulatory acceptability, sound management, and potential for replication.

At the close of the Board meeting on January 18, 1982, eleven projects from the Initial Solicitation had passed eligibility and maturity tests and were ready to be measured against the strength criteria. The entire Phase I evaluation process should be completed in February, with Board decisions to advance some projects to Phase II coming in early March, 1982. Phase II discussions with proposers will then seek to define the amount and terms of any financial assistance the Corporation may provide, taking into consideration all other competing proposals.

At its December 11, 1981 meeting, the Board received a staff briefing on the maturity criteria. Typically, a mature project is characterized by the accomplishment of certain milestones, including the acquisition of all rights to the plant site, to the key technology, and to the necessary resource (feedstock), utility, and water inputs. A mature project will have completed comprehensive financial viability and technical feasibility studies, and its design work will be sufficiently advanced to allow costs to be estimated with a high degree of accuracy during Phase II evaluation. Finally, a mature project will have clearly outlined the estimated amounts and terms of commitments of each sponsor to the project, and will either have secured or realistically expect to secure all necessary permits on a schedule consistent with the proposed construction start-up date.

Also at the December meeting, the staff briefed the Board on generic issues involving project strength, and at the January 18, 1982 meeting the staff provided additional materials on project strength criteria. An assessment of project strength will include judgments about a project's technological soundness, potential for replication, and management capability. It will further include a comprehensive economic viability study, an evaluation of product marketability, and an analysis of potential project compliance with all socio-economic, health and safety, and environmental regulations.

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[1] A formal Supplement to the Initial Solicitation was issued on December 11, 1981; this set a deadline of January 4, 1982 for response to the Corporation's July 1981 letters to sponsors.

[2] The Advisory Committee is composed of the Secretaries of Treasury, Defense, Interior, and Energy and the Administrator of the Environmental Protection Agency.

Projects meeting all Phase I eligibility and maturity criteria and appearing attractive in terms of the strength criteria will be considered for Phase II evaluation. When the Board advances projects to Phase II in early March 1982, it may establish parameters for competition among projects during that phase. At this point each project will be examined in depth on its intrinsic merits, against any such parameters, on its relative strengths in terms of the foregoing criteria, and on its ability to advance the programmatic goals of the Corporation.

Second Solicitation and Subsequent Solicitations

The Corporation's Second Solicitation for proposals was issued by the Board of Directors on December 11, 1981; the closing date for response to the solicitation is May 31, 1982. Projects now competing under the Initial Solicitation may request consideration under the Second Solicitation, and six projects have indicated in writing that they will do so.

When the Board advances certain projects to Phase II under the Initial Solicitation, the Board may also, by letter, specifically encourage certain other projects not being advanced to resubmit proposals under a subsequent solicitation. This would be done for projects that appear particularly promising but are not yet mature. The Corporation will maintain active files on any such project and review supplemental submissions as they are provided.

Current planning anticipates that, subject to the availability of funds and evolving Board preferences, there will be at least two additional general solicitations following the closing of the Second Solicitation. The Board may also consider whether targeted solicitations directed at particular resources or technologies would be appropriate for programmatic purposes.

Transfer of Union Oil and Tosco Projects from DOE

At its meeting on December 11, 1981 the Board of Directors voted to accept the transfer of both the Union Oil Project and the Tosco Project from the Department of Energy to the Corporation, contingent on the Corporation's being declared operational by the President. The Board took no action on the transfer of the Great Plains Project because P.L. 97–100 precludes such transfer.

Project Summaries

The 63 projects available for review under the Initial Solicitation through the December 11, 1981 Board meeting differed from the 63 projects initially submitted to the Corporation by its March 31, 1981 deadline. Changes include: elimination of the three projects awarded financial assistance by the Department of Energy;[1] the addition of five projects that competed unsuccessfully for financial assistance under the Federal Nonnuclear Energy Research and Development Act authority of the Department of Energy's Interim Alternative Fuels Program;[2] and the withdrawal of two proposals from consideration by the Corporation.[3]

Of the 63 projects originally submitted to the Corporation, 36 were coal projects, 13 shale oil, 11 tar sands and/or heavy oil, two hydrogen from water by electrolysis, and one not specifically classified. These projects proposed to employ a variety of technologies, processes, and resources and to produce a multiplicity of products. Thus, the Corporation had before it a broad mix of projects from which to choose.

At its January 18, 1982 meeting, the Board reduced the number of projects under Phase I evaluation to 11. Nine of the projects are coal based, one is oil shale, and one a tar sands/heavy oil project.

In making its selections the Board noted that several other projects, including shale and tar sands projects, have substantial potential but lack maturity at this time. These projects are being encouraged to reapply under subsequent solicitations as they gain maturity.

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[1] Union Oil, Tosco and Great Plains Gasification Associates.

[2] CoaLiquid, Banklick, Fusion Energy, Shale Development Corporation and Great Basin.

[3] Clark Oil and Plateau.

Project Descriptions and Status Reports

The following 11 projects were chosen by the Board of Directors to undergo project strength evaluations by the staff. Recommendations on each will be made to the Board in February 1982.

The *Coolwater* project will produce medium Btu gas using a Texaco gasifier. The gas is then used to produce electricity using an integrated combined cycle. Construction of the plant began in December 1981. The plant, in Daggett, California, has an initial capacity of 4,300 barrels per day of oil equivalent in 1984, with additional capacity to 7,036 barrels by 1988. The project is sponsored by Texaco, Southern California Edison Company, Electric Power Research Institute, Inc., Bechtel Power Corporation, General Electric Company, JCWP, and the Empire State Electric Energy Research Company. The sponsors are seeking price guarantees.

The *Memphis* project will produce medium Btu industrial fuel gas using the U-gas gasifier. Located in Memphis, Tennessee, the project is scheduled for construction start-up in the fourth quarter of 1982. Plant capacity will be 8,400 barrels per day of oil equivalent, beginning in 1984. The project is sponsored by the Memphis Light, Gas and Water utility, which is requesting both loan and price guarantees.

The *WyCoal* project will produce synthetic natural gas from coal in Douglas, Wyoming. The conversion process consists of Lurgi fixed-bed gasification, followed by gas clean-up, shifting, acid removal, and finally methane synthesis. Start of construction is scheduled for April 1983. The plant's initial capacity will be 13,500 barrels per day of oil equivalent starting in 1986, with expansion to 27,000 barrels in 1988. The project is sponsored by WyCoal Gas, Inc., a Panhandle Eastern Company. Both loan and price guarantees are sought.

The *Breckinridge* project will produce a full complement of refinery feedstocks using the H-Coal direct liquefaction process in Breckinridge County, Kentucky. Construction start-up is scheduled for the fourth quarter of 1983. Plant capacity will be 49,800 barrels per day of oil equivalent starting in 1989. The project sponsors are Ashland Synthetic Fuels, Inc. and Bechtel Petroleum, Inc. They are requesting a loan guarantee.

The *First Colony* project, located in Creswell, North Carolina, will produce methanol from peat using the KBW gasification process followed by the ICI synthesis process to covert the synthetic gas into methanol. Start of construction is scheduled for the fourth quarter of 1982. Plant capacity will be 1,900 barrels per day of oil equivalent starting in 1985. The project is sponsored by Peat Methanol Associates, made up of the Energy Transition Corporation, Koppers Company, and J. B. Sunderland. The sponsor is asking loan and price guarantees.

The *Hampshire* project will produce gasoline from coal in Campbell County, Wyoming. The process consists of gasifying coal in Lurgi and KBW gasifiers, followed by gas cleaning, shifting, acid gas removal, methanol synthesis and conversion of the methanol to gasoline by the Mobil MTG process. Start of construction is scheduled for mid-1983. Plant capacity will be 19,293 barrels per day of oil equivalent starting in 1987. The project sponsor, Hampshire, is a joint venture of Kaneb Services, Inc., Koppers Company, Northwestern Mutual Life Insurance Company, Metropolitan Life Insurance Company, and Standard Oil of Ohio. Loan and price guarantees are requested.

The *Northern Alabama* project will produce methanol from coal in Murphy Hill, Alabama. The process consists of gasifying coal in a Koppers-Totzek entrained bed gasifier, followed by shifting, acid gas removal and methanol synthesis. Start of construction is scheduled for the first quarter of 1983. Plant capacity will be 12,000 barrels per day of oil equivalent coming on line in late 1986. The project sponsors are Santa Fe International, Kidder Peabody, and Air Products and Chemicals. They are requesting both loan and price guarantees.

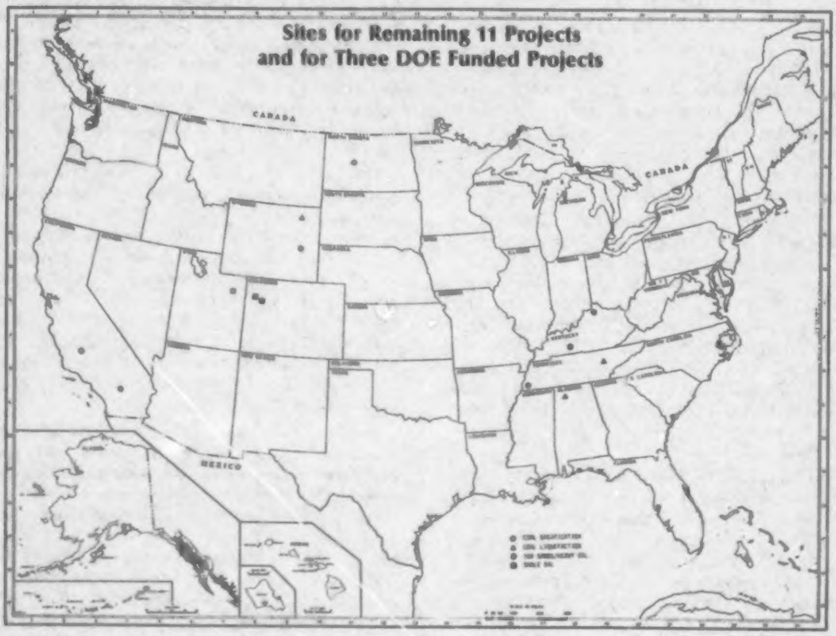
The *Tennessee Synfuels* project, located in Oak Ridge, will produce gasoline from coal. The processes to be used include KBW gasification followed by the ICI methanol synthesis process followed by the Mobil MTG gasoline process. Start of construction is scheduled for the third quarter of 1983. The plant's initial capacity will be 7,691 barrels per day of oil equivalent in 1985, with expansion to 50,000 barrels per day in 1988. The project sponsor is Tennessee Synfuels Associates, a joint venture of Koppers Synfuels Corpo-

ration and Citgo Synfuels, Inc. Loan and price guarantees are sought.

The *Paraho* project will produce shale crude using room and pillar mining followed by surface retorting using the Paraho process. Located in Uintah County, Utah, project construction is scheduled to begin in mid-1982. Initial capacity will be 10,000 barrels per day by 1984, with expansion to 30,000 barrels by mid-1985. The project is sponsored by the Paraho Development Corporation, which is requesting both loan and price guarantees.

The *Calsyn* project will use the Dynacracking process to upgrade heavy oil and bitumen from tar sands for refining in a conventional petroleum refinery. Construction is scheduled to begin 1–2 months after an award is received from the Corporation. The plant will be located in Pittsburg, California. Plant capacity is approximately 5,100 barrels per day starting in late 1983 or early 1984. The project sponsor is Calsyn, a joint venture of Tenneco Oil Company, CDC Oil and Gas, Ltd, Alberta Oil Sands Technology and Research Authority, and Dynalectron Corporation. The sponsor is requesting a loan guarantee.

The *CoaLiquid* project in Shelbyville, Kentucky will produce a coal-oil mixture using the CoaLiquid technology. The plant, which is fully constructed, is producing 1,000 barrels per day. The project is sponsored by CoaLiquid, Inc., which is asking for price guarantees.


Sites for Remaining 11 Projects and for Three DOE Funded Projects

Progress Toward Meeting Statutory Goals

In establishing the Synthetic Fuels Corporation Congress directed it to pursue a number of definite, distinct goals. It is to use its financial incentives to accelerate development of a commercial synthetic fuels industry characterized by broad diversity and significant production capacity. Diversity is to be sought in technology and resource base. National production goals are set at 500,000 barrels of crude oil equivalent per day by 1987 and 2,000,000 barrels by 1992.[1] Other concerns include development of the industry with a maximum of fiscal responsibility and private sector competitiveness.

The Energy Security Act further directs the Corporation to seek its various goals in a two-part approach. Through the mid-1980's the Act encourages diversity as well as production, to lay a foundation of experience and information based on a wide array of potential synthetic fuels options. Thereafter and subject to the actions of Congress and the President following submission of the comprehensive strategy, the Corporation is to encourage the synthetic fuels industry to expand production capacity to meet national production goals. Any such expansion will necessarily depend heavily on private sector initiatives and investment in a wide range of projects, which in turn will be determined by the information and experience gained from the initial efforts.

The Corporation has made progress toward advancing the pre-1985 goals of the Act. The proposals received in response to the Initial Solicitation, and others expected to apply under the Second or other solicitations, represent an encouragingly diverse mix of candidates from which to build a balanced portfolio of pioneer commercial plants.

The 11 projects considered by the Board in January to be sufficiently mature to undergo Phase I strength evaluations represent considerable diversity in terms of resources, technologies, locations and products. This diversity is reflected in Charts A and B, which illustrate the diversity cross section of the original 63 projects and of the 11 now undergoing Phase I strength reviews. Also, to the extent it deems desirable for programmatic reasons, the Board may consider issuing targeted solicitations directed at specific resources or technologies.

By the mid–1980's a compendium of projects, funded by the Department of Energy's interim program, by the Corporation's limited assistance awards, and by the private sector alone, should be operating and providing valuable information and experience, particularly for the construction and start-up stages of such projects. Besides helping the Corporation in developing its comprehensive strategy, the resulting data should aid private investors in determining how best to enter the synthetic fuels market and should support state and local government planning efforts to deal with a growing industry.

The comprehensive production strategy is integral to the two-part approach of the Energy Security Act. The strategy must assess the experience of the first part of the program in light of existing and anticipated external conditions, and must directly address private sector responsibilities essential to meeting the national production goals.

The synthetic fuels program is a national program to meet national goals, but the key to its success is private enterprise initiative and involvement. Well-designed and efficiently managed projects should operate in a competitive marketplace. Thus, the private sector must take the lead in project concept, development, and management and must be willing to risk its own money. The Corporation initially intends to provide financial assistance only in measured amounts and as a last resort to cover clearly defined and extraordinary risks.

It is premature to predict which projects will be assisted by the Corporation or what their production or budgetary impact may be. Regardless, the financial resources available to the Corporation in its first stage activities under the Act, prudently managed within a well-conceived program, should make a significant contribution to both the diversity and production goals of the Act.

Synthetic fuel production levels over the next decade will be determined by the progress of projects receiving Corporation assistance as well as by those which proceed independently. Much

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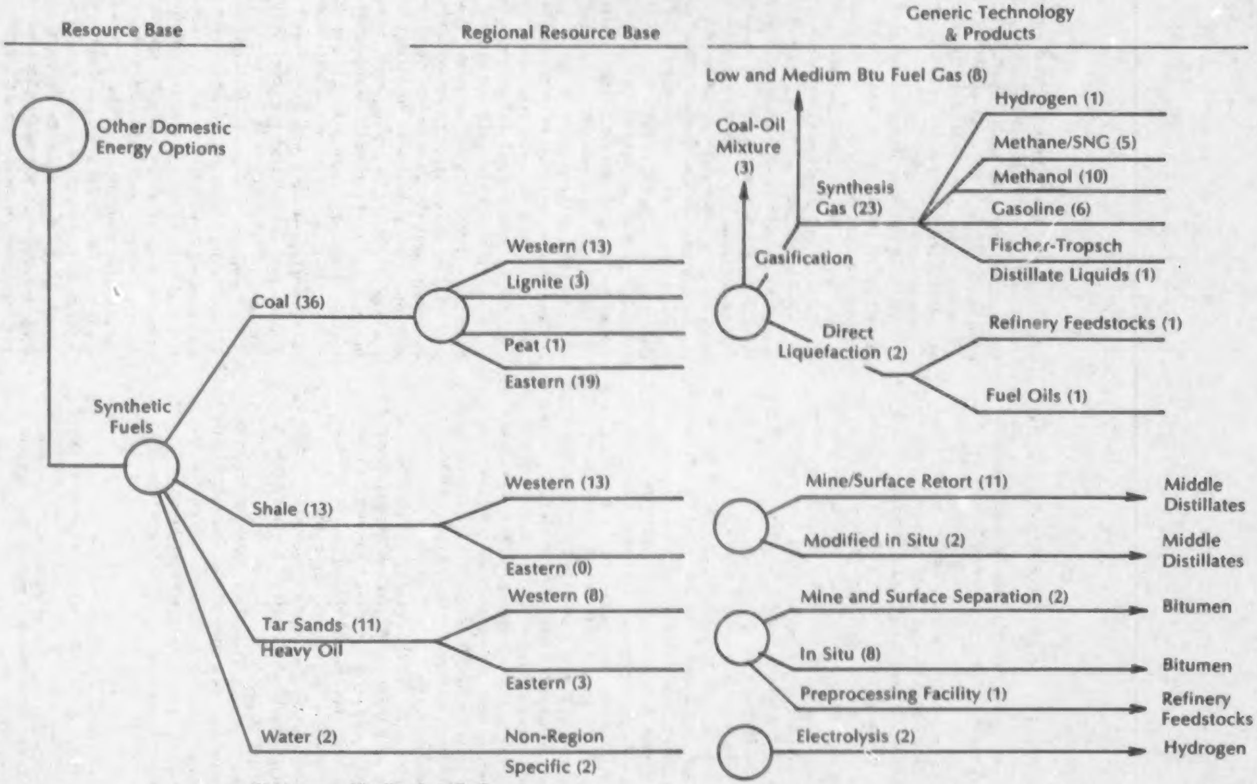
[1] Briefings on the relation between the production and diversity goals, emphasizing the choices between short-term production on the one hand and diversity and long-term production on the other, were provided the Board at its January 18, 1982 meeting.

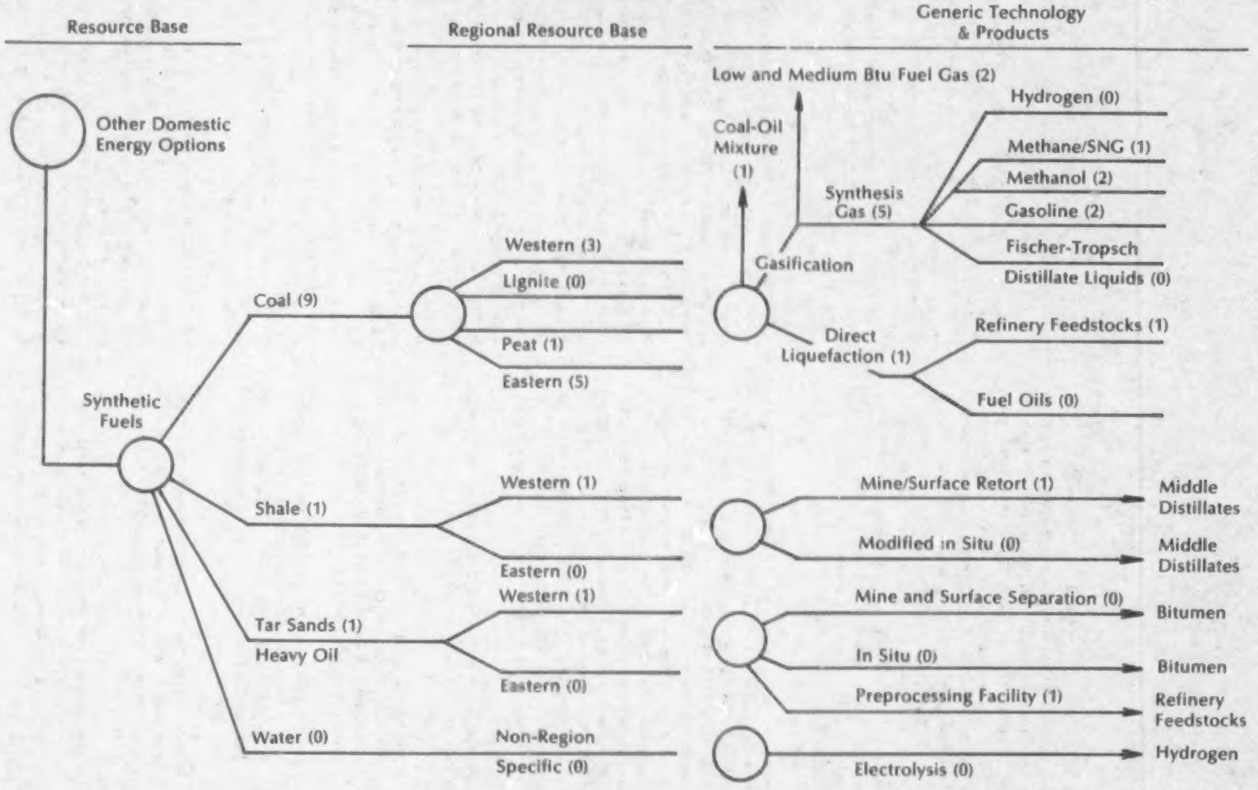
CHART A

Diversity Cross Section of Original 63 Projects


Resource Base
Regional Resource Base
Generic Technology & Products
Other Domestic Energy Options
Synthetic Fuels
Coal (36)
Western (13)
Lignite (3)
Peat (1)
Eastern (19)
Low and Medium Btu Fuel Gas (8)
Coal-Oil Mixture (3)
Gasification
Synthesis Gas (23)
Hydrogen (1)
Methane/SNG (5)
Methanol (10)
Gasoline (6)
Fischer-Tropsch
Distillate Liquids (1)
Direct Liquefaction (2)
Refinery Feedstocks (1)
Fuel Oils (1)
Shale (13)
Western (13)
Eastern (0)
Mine/Surface Retort (11)
Middle Distillates
Modified in Situ (2)
Middle Distillates
Tar Sands (11)
Heavy Oil
Western (8)
Eastern (3)
Mine and Surface Separation (2)
Bitumen
In Situ (8)
Bitumen
Preprocessing Facility (1)
Refinery Feedstocks
Water (2)
Non-Region Specific (2)
Electrolysis (2)
Hydrogen

(1) Not specifically classified

CHART B
Diversity Cross Section of Remaining 11 Projects


Resource Base
Regional Resource Base
Generic Technology & Products
Other Domestic Energy Options
Synthetic Fuels
Coal (9)
Western (3)
Lignite (0)
Peat (1)
Eastern (5)
Low and Medium Btu Fuel Gas (2)
Coal-Oil Mixture (1)
Gasification
Synthesis Gas (5)
Hydrogen (0)
Methane/SNG (1)
Methanol (2)
Gasoline (2)
Fischer-Tropsch
Distillate Liquids (0)
Direct Liquefaction (1)
Refinery Feedstocks (1)
Fuel Oils (0)
Shale (1)
Western (1)
Eastern (0)
Mine/Surface Retort (1)
Middle Distillates
Modified in Situ (0)
Middle Distillates
Tar Sands (1)
Heavy Oil
Western (1)
Eastern (0)
Mine and Surface Separation (0)
Bitumen
In Situ (0)
Bitumen
Preprocessing Facility (1)
Refinery Feedstocks
Water (0)
Non-Region Specific (0)
Electrolysis (0)
Hydrogen

will depend on market developments and private sector initiatives; national production levels cannot be projected precisely at this time. Still, the three projects awarded assistance under the interim Department of Energy program and the eleven projects remaining under the Corporation's Initial Solicitation do provide some indication of the substantial potential of an emerging synthetic fuels industry. If all these projects were to proceed and expand as planned, their cumulative production capacity would reach about 225,000 barrels per day in 1987 and about 300,000 barrels per day in 1992.

Large expenditures and long lead times are required to build the initial projects from which will come knowledge about economic, technological and environmental performance and about development of the industrial, engineering, and construction capabilities necessary to support rapid expansion of a synthetic fuels industry. Thus, it is critical that the Nation maintain a long-term, strategic view of synthetic fuels and that we proceed with a diverse set of initial projects now. Evaluations about whether, and how, the private sector can expand production on a large scale should be undertaken as information and experience accumulate.

Besides setting diversity and production goals, the Act specifies a number of other related objectives, including:

- encouraging and assuring the flow of capital funds to those sectors of the national economy which are important to the domestic production of synthetic fuels;
- encouraging private capital investment and activities in the development of domestic sources of synthetic fuels and fostering competition in the development of synthetic fuel resources;
- encouraging and supplementing rather than competing with or supplanting private capital investments in domestic synthetic fuels projects;
- fostering greater energy security, reducing the Nation's economic vulnerability to disruption of imported energy supplies, and giving special consideration to the production of synthetic fuels for national defense applications.

The Corporation's recognition of and response to these several goals are reflected in its project selection criteria. The criteria reflect the view that the Corporation should act as a catalyst for industry development. If the Corporation uses its limited financial assistance to support diverse synthetic fuels projects that provide a foundation of technological experience and market development, then a private sector industry can and will evolve in an orderly fashion and with adequate capital formation.

The Act's goal of encouraging competition is supported in the Corporation's development of a multiple category evaluation process designed to reveal comparative differences among project proposals. By publishing a uniform set of project evaluation criteria in its solicitation documents, the Corporation has imposed a fair and enforceable set of standards for competitive project selections. Additional measures for enhancing competition may also be developed.

The Corporation is implementing the Act's charge to encourage and supplement, rather than compete with or supplant, private capital investment in synthetic fuels by adopting a "credit elsewhere" test. Under this criterion the Corporation will examine: (a) whether additional equity or debt capital could be raised from sponsors, institutions, or the public without Corporation assistance, consistent with prudent business practices of such parties; and (b) whether the sponsors have exhausted all reasonable possibilities for raising capital on such a basis, including the sponsors' giving completion guarantees to potential investors.

Finally, progress toward the goal of fostering energy security and reducing the Nation's economic vulnerability to import disruptions will be determined largely by our overall progress toward the primary diversity and production goals. It should be noted, however, that the solicitation documents do specifically encourage sponsors to consider the sale of some product to the Department of Defense.

At this time the Corporation has no particular recommendations to Congress for any specific actions in support of the Corporation's efforts. Such recommendations may be appropriate in future reports, as the base of synthetic fuels knowledge and experience expands.

Regulatory Considerations

The synthetic fuels projects assisted by the Corporation will be the first of their kind and, although much has been written about their environmental and socio-economic impacts, careful evaluation of their potential for complying with regulatory requirements will be necessary. Much remains to be learned through monitoring their construction and operation.

An important measure of whether a project is sufficiently strong for consideration of financial assistance will be the status of its compliance with applicable regulatory requirements and its ability to minimize environmental, health and safety, water, socio-economic, and labor impacts. Significantly, the Corporation is also required by the Energy Security Act to give priority consideration to projects in states that indicate an intention to expedite the permitting process.

Throughout Phase I of the evaluation process, an effort has been made to assess the socio-economic and environmental risks associated with a given project and to incorporate that risk assessment in probabilistic terms. In Phase II projects will be further evaluated in terms of their potential for good environmental performance. After awards, individual projects' environmental and socio-economic impacts will be monitored, and this monitoring will contribute to future reports to Congress.

Areas of concern which have been identified by applicable regulatory authorities include the potential emission of toxic substances in the production of synthetic fuels; the emission of increased quantities of controlled substances, like particulates and sulphur dioxide; the toxicity and disposal of solid wastes, like coal ash and spent shale; and the impact on water quality and availability, particularly in arid parts of the West. The socio-economic impacts of proposed projects have also been identified by affected states and local governments as among their major concerns.

Although it is too early to report on the results of Phase I proposal evaluations under the Initial Solicitation, the following regulatory matters will be addressed in the evaluation process:

- An acceptable monitoring and impact assessment plan, developed in consultation with appropriate authorities, is proposed;
- The site is in compliance with all environmental regulations;
- All permit requirements are identified and understood;
- All regulatory guidelines can be met and permits obtained within a realistic time frame;
- An effective and economic environmental and health-related emission abatement approach, acceptable to permitting agencies, is proposed;
- All pending rules and regulations are identified and prudently planned for; and
- Consultation with relevant government entities and other organizations is intended.

Further, the Corporation will consider the potential cumulative impacts and related constraints of multiple projects in a region.

Project proposals will also be judged according to their ability to secure sufficient water rights to meet project needs, even in drought years. The Corporation will consult with state governors and officials concerning the impacts on water users resulting from assisted projects, or from any attendant development or future expansion of synthetic fuels activities. The Corporation will advise the President and Congress on apparent conflicts between synthetic fuels activities and other water users and on the relationship between reported conflicts or deficiencies in water supplies for projects and federal policies or proposals for water development.

As part of its evaluation of a sponsor's efforts to mitigate the socio-economic impacts of a project, the Corporation will consider whether a sponsor has identified project needs in terms of community and regional infrastructure and services, and whether a problem identification process and impact mitigation strategy have been developed. The Corporation will also consider the abilities and/or joint efforts of sponsors and other interested parties to put in place acceptable financial arrangements for impact mitigation as needed; and it will look for assurances that essential housing and other infrastructure will be in place in time to accommodate the needs of the project workforce, including temporary needs during peak construction periods. Additionally, the degree to which the mitigation strategy addresses area-wide impacts from the project and concurrent development will be assessed.

In an effort to promote understanding and greater regulatory cooperation and compliance, personnel from the Corporation have been meeting on a regular basis with officials from the various states, counties, and towns in which synthetic fuels plants are proposed. These meetings provide a means for exchanging information, expressing concerns and providing input among the Corporation, state and local officials, environmental groups, and the general public. During Phase II evaluations, beginning in March 1982, contact with state and local officials will be intensified to provide more detailed information on the status of permits, licenses, water problems, and socio-economic planning programs.

Administration

Much of the work of building the Corporation from the ground up necessarily had to be done early in the first year and much of that work was administrative in nature. Basics like physical space, office furniture and equipment, mail handling, telecommunications and data processing were provided on a continuing basis as staff expanded. Interim policies and procedures governing personnel, security, procurement, banking, budgeting, and accounting were developed and implemented.

Once the initial staff was in place and essential support and financial services provided, the Corporation began to address longer range needs and policies. Efforts were made to identify and secure adequate headquarters space for the Corporation. A nationwide recruitment plan was initiated and work went forward to develop equitable officer and employee compensation and benefits packages necessary to attract and retain the skilled professionals vital to the Corporation's success. Job classifications and position descriptions were under development and personnel files were established and maintained in current status.

Work was also begun to develop effective internal management systems for the Corporation. Particular attention was given to the areas of financial management and control of funds, personnel administration, procurement and contracting, travel and relocation, and support services. Also, the Board's Audit Committee has begun to work closely with the Corporation's administrative and financial staff, and the Committee's close attention and guidance are proving highly beneficial.

During the Corporation's first year [illegible] accounting system was implemented. Budgets were prepared for presentation to the Congress. Internal financial plans were developed and monitored. Necessary reports and financial statements were issued. Contracting activities were undertaken as required.

Concerning the latter, there was early in 1981 some Congressional criticism of contracting practices, to which the staff was responsive. The Corporation terminated most of its outstanding contracts by late spring. At its October 28, 1981 meeting the Board of Directors adopted specific policies and procedures for the use of consultants and administration of contracts which should eliminate further problems.

Thus, by the end of 1981 the Corporation had made good progress in instituting initial policies and procedures to insure its effective and economic functioning and to provide all necessary reports and input to the Congress and all appropriate information to the public. Extensive effort will, however, be needed in 1982 to proceed with the development of financial and administrative systems necessary to support the Corporation in its project assistance commitments.

Disclosure and Confidentiality

At its October 28, 1981 meeting the Board of Directors adopted final Guidelines on Disclosure and Confidentiality. This action marked an important milestone for the Corporation.

To carry out the requirements of Section 121 of the Act, the Corporation had first published in the *Federal Register* on April 14, 1981 interim guidelines on disclosure and confidentiality. These interim guidelines established procedures for receiving, processing and acting on public requests for information. Public comment was invited, with a deadline of May 11, 1981.

Twenty-four written comments were received from project sponsors, government entities, conservation, environmental and citizen organizations, and individuals. After careful review and evaluation of all the comments, a revised set of interim guidelines was prepared, approved by the Chairman, and published in the *Federal Register* on September 17, 1981. These were the Guidelines on Disclosure and Confidentiality adopted by the Board on October 28, 1981.

The Corporation is not subject to the Freedom of Information Act (FOIA); moreover, the Energy Security Act grants significant flexibility in the matter of information disclosure. Nevertheless, the Corporation did establish formal Guidelines which generally follow FOIA request procedures used by federal agencies. The purpose of the Guidelines is to insure the protection of confidential information and at the same time to guarantee full access to all disclosable information. To date, over 336 informal and 32 formal requests for information have been received and processed.

The Guidelines provide for maintenance of a public reading room,[1] to make readily available to the public without formal request a broad variety of information. The reading room contains general descriptive material, press releases, copies of the minutes of each Board meeting, copies of the Corporation by-laws, its reports to Congress, and the nonconfidential portions of all proposals submitted to the Corporation for consideration.

Financials

The Energy Security Act authorized the Corporation to expend up to $35,000,000 during fiscal year 1980 for administrative expenses, of which the Inspector General's Office is authorized to expend up to $2,000,000. These amounts are adjusted annually, as of October 1, by an amount equal to the percentage increase in the Gross National Product implicit price deflator. The Corporation computed the total authorization for fiscal year 1981 to be $38,185,000, of which $2,182,000 was available to the Office of the Inspector General for administrative expenses. In addition, the Act authorizes expenditures of up to $10 million during any fiscal year for generic studies and specific reviews of individual proposals.

Of the $38,185,000 authorized for administrative expenses during fiscal year 1981, the Corporation expended $6,700,811. Of this amount, personnel costs and contracted services accounted for approximately two-thirds of total expenditures. The remaining one-third was spent for such needs as office rent, telecommunications, photocopying, administrative support services and supplies, and recruitment expenses.

The Office of the Inspector General spent under 20 percent of the $2,182,000 available to it, including personnel costs and certain allocated administrative expenses.

In total, $6 billion was available to the Corporation during fiscal year 1981 to provide financial assistance to stimulate development of a synthetic fuels industry. Since, however, fiscal year 1981 was largely devoted to start-up operations, no funds were committed for project assistance, generic studies, or proposal reviews.

During fiscal year 1982 the Corporation is expected to make its initial awards for financial assistance. Still, administrative expenses budgeted for fiscal year 1982 are less than half the total authorization and reflect a management decision to limit total staff to fewer than the 300 professionals permitted by law.

The Corporation retained Peat, Marwick, Mitchell & Co. to perform the annual audit as required by Section 177(b)(1) of the Energy Security Act. The auditors' opinion on the financial statements presented follows immediately.

The Corporation's financial position, operating results, and other pertinent financial information as of September 30, 1981 are displayed in tables 1 through 3.

---

[1] The Reading Room is located at 2000 L Street, N.W., Washington, D.C., and is open all business days from 9:00 a.m. to 4:30 p.m. As of March, 1982 the Reading Room will be located at 2121 K Street, N.W.

Peat, Marwick, Mitchell & Co.

Certified Public Accountants

1990 K Street, N.W.
Washington, D.C. 20006

The Board of Directors
United States Synthetic Fuels Corporation:

We have examined the statement of financial condition of United States Synthetic Fuels Corporation as of September 30, 1981 and the related statements of operations and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the aforementioned financial statements present fairly the financial position of United States Synthetic Fuels Corporation as of September 30, 1981 and the results of its operations and the changes in its financial position for the year then ended, in conformity with generally accepted accounting principles.

Peat, Marwick, Mitchell & Co.

November 18, 1981

TABLE 1

Statement of Financial Condition
September 30, 1981

Assets

Current assets:		
Petty cash		$ 650
Prepaid expenses		33,251
Deposits		37,371
Total current assets		71,272
Equipment at cost	$ 95,756	
Less accumulated depreciation	(9,961)	85,795
Leasehold improvements	25,177	
Less accumulated amortization	(8,392)	16,785
		$173,852

Liabilities and Equity in Net Assets

Current liabilities:		
Outstanding checks not presented for payment (note 2)		$171,749
Accounts payable		66,944
Accrued expenses		378,535
Withheld taxes		16,447
Accrued annual leave		70,727
Total current liabilities		704,402
Equity in net assets:		
Capital note (note 1)	$ 6,170,261	
Accumulated administrative expenses	(6,700,811)	(530,550)
Commitments and contingencies (note 4)		
		$173,852

See accompanying notes to financial statements.

TABLE 2

Statement of Operations
For the year ended September 30, 1981

Administrative expenses (note 3):	
Personnel costs	$3,053,312
Contractual services	1,420,053
Office occupancy	950,149
Administrative services	528,604
Inspector general	318,204
Travel	163,933
Employee relocation and recruitment	244,875
Depreciation and amortization expense	18,353
Miscellaneous	3,328
Total administrative expenses	$6,700,811

See accompanying notes to financial statements.

TABLE 3

Statement of Changes in Financial Position
For the year ended September 30, 1981

Source of working capital—capital note issued	$6,170,261
Uses of working capital:	
Total administrative expenses	6,700,811
Less depreciation expense which does not use working capital	18,353
Working capital used by operations	6,682,458
Purchase of equipment	95,756
Purchase of leasehold improvements	25,177
	120,933
Decrease in working capital	$(633,130)
Changes in components of working capital:	
Increase (decrease) in current assets:	
Petty cash	650
Prepaid expenses	33,251
Deposits	37,371
	71,272
Increase (decrease) in current liabilities:	
Outstanding checks not presented for payment	171,749
Accounts payable	66,944
Accrued expenses	378,535
Withheld taxes	16,447
Accrued annual leave	70,727
	704,402
Decrease in working capital	$(633,130)

See accompanying notes to financial statements.

Notes to Financial Statements
September 30, 1981

(1) The Corporation

The United States Synthetic Fuels Corporation (Corporation) was created on June 30, 1980 by the Energy Security Act (P.L. 96-294) as a Federal entity of limited duration for the purpose of providing financial assistance for the development of commercial synthetic fuel projects. The Corporation began operations on October 8, 1980.

The Supplemental Appropriations Act of 1980 (P.L. 96-304), provides that $6 billion is available immediately in the Energy Security Reserve Fund in the United States Treasury for purposes of Title I of the Energy Security Act.

The Corporation is subject to annual expenditure limits of $35,000,000 for administrative expenses including $2,000,000 for Inspector General operations. For each fiscal year commencing after September 30, 1980, these limitations shall be increased as of October 1 each year by an amount equal to the percentage increase in the Gross National Product implicit price deflator as published by the Department of Commerce. The Corporation is authorized to expend $10,000,000 per year for generic studies and specific reviews of individual proposals.

The Corporation draws funds by issuing a noninterest-bearing note payable to the United States Treasury, due September 30, 1997 or upon termination of the Corporation. During the year ended September 30, 1981, the Corporation drew $5,872,782 for administrative expenses and $297,479 for inspector general operations. These amounts have been classified as a capital note in the accompanying financial statements. The obligations of the Corporation under this note will be transferred to the United States Treasury upon transfer of the Corporation's powers, duties, rights and obligations to the United States Treasury pursuant to Section 193(a) of the Energy Security Act or pursuant to any other provisions of applicable law.

(2) Summary of Significant Accounting Policies

(a) Funding

Pursuant to a Memorandum of Understanding between the Corporation and the U.S. Treasury effective January 14, 1981 and a note issued by the Corporation to the Secretary of the Treasury dated January 23, 1981, the Treasury Department Fiscal Service has established and issued to the National Savings and Trust Company a letter of credit in the amount of $50,000,000. Drawdowns against the letter of credit are made by the bank as required to fund transactions on a daily basis, obviating the need for the Corporation to maintain a cash balance and thus assuring that budget outlays of the Treasury Department are held to a minimum at any one time. The amount available under the letter of credit was $44,550,467 at September 30, 1981.

Total administrative expenses exceed actual draws made on the capital note because expenditures have been recognized on the accrual method of accounting.

(b) Equipment and Leasehold Improvements

Equipment purchases and leasehold improvements are recorded at cost. Depreciation is provided on a straight-line basis over the useful life of the equipment, which is estimated at five to ten years. Amortization of leasehold improvements is provided over the life of the lease.

(c) Income Taxes

The Corporation is exempt from Federal income taxes under Section 155 of the Energy Security Act.

(3) Expense Classification

The financial statements reflect only administrative expenses because, as of September 30, 1981, the Corporation had not entered into any financial assistance agreements for synthetic fuels projects. Inspector General expenses include personnel costs and an allocation of certain other administrative expenses.

(4) Lease Commitments for Office Space

As of September 30, 1981, the future rental payments required under operating leases that initially had noncancelable lease terms in excess of one year are $221,697 for fiscal year 1982.

Rent expense totalled $590,400 in 1981.

On October 28, 1981, the Corporation entered into an agreement for office space which requires monthly rental payments of $160,600 for fifty-eight months commencing July 1, 1982.

Summary of Receipts
Fiscal Year 1981

The following is a summary of the Corporation's receipts for Fiscal Year 1981 as reported on a quarterly basis to the Secretary of the Treasury. It is included in this report pursuant to Section 154(d) of the Energy Security Act.

Substantially all of the Corporation's receipts during Fiscal Year 1981 were draws on the U.S. Treasury. The Corporation collected no fees in connection with financial assistance during the fiscal year.

Draws on the U.S. Treasury	$6,199,533
Interest	3,124
Other refunds and reimbursements	40,535
Total receipts	$6,243,192

Statement of Compensation, September 30, 1981

The following statement of compensation of persons employed or under contract at salary rates exceeding $2,500 per month as of September 30, 1981 is included in this report pursuant to Section 177(c)(2) of the Energy Security Act.

COMPENSATION OF PERSONS EMPLOYED OR UNDER CONTRACT AT SALARY RATES EXCEEDING $2,500 PER MONTH
September 30, 1981

Title	*Annual Salary Rate*
Chairman	
Executive Assistant to Chairman and Board	$69,630
Acting Chief Operating Officer	69,630
Attorney	50,000
Senior Policy Advisor/Analyst	40,000
Administrative Assistant	30,000
Administration	
Director, Personnel	60,000
Acting VP-Administration	60,000
Director, Management Planning & Systems	58,000
Director, Administrative Services	40,000
Director, Public Disclosure	32,000
Senior Management Analyst	31,400
External Relations	
VP-External Relations	69,630'
Director, External Relations	50,000
Assoc. Director, House Relations	47,000
Assoc. Director, Senate Relations	47,000
Assoc. Director, State and Local Relations	47,000
Press Officer	43,500
Executive Assistant to the VP	42,000
Congressional Relations	40,000
Industrial Relations	38,500
Finance	
Acting VP-Finance	69,630'
Manager, Financial Analysis and Systems	65,000
Senior Financial Analyst	60,000
Senior Financial Analyst	48,500
Financial Analyst	35,000
General Counsel	
General Counsel	52,750
Senior Attorney	69,500
Senior Attorney	60,000
Senior Attorney	60,000
Senior Attorney	50,112
Attorney	38,000
Planning	
VP-Planning	140,000
Technical Manager	69,500
Technical Advisor	69,500
Senior Planning Analyst	45,000

Title	*Annual Salary Rate*
Projects	
Executive Assistant to the Acting COO	62,500
Asst. VP	60,600
Senior Engineer	58,000
Senior Engineer	55,000
Labor Relations	55,123
Senior Cost Analyst/Engineer	52,600
Senior Socio-economic/ Environmental Analyst	44,000
Senior Analyst	42,000
Program Analyst	37,200
Program Analyst	36,900
Administrative Assistant	32,160
Policy Analyst	30,000
Information Center	
Director, Information Services	52,000
Manager, Technical Services	30,500
Technology and Engineering	
VP-Technology and Engineering	69,630
Senior Engineer	50,000
Senior Engineer	50,000
Senior Engineer	48,000

Under Contract	*Per Diem Rate*[2]
BOWIE, Robert	$ 270
LESSEY, Samuel K.	300
MERKLEIN, H.A.	250
MILLER, Russell	250
MOWER, Jack	240
POLLACK, Irving	270
RAWLS, Eugene	375
SELTZER, Joseph	300
STORCH, Laurence	250
THOMPSON, James	500
TUCKER, William	400
	Hourly Rate[2]
SHERMAN, Stanley	$ 38
	Monthly Rate[2]
RODGERS, Donald	$ 3,600

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[1] Effective 2/25/81, certain officers voluntarily agreed to reduce their salaries to the rate prescribed for Executive Level I, pending review by the Board of Directors of the appropriate level.

[2] The Corporation interprets the phrase "salary rate exceeding $2,500 per month" to include contract employees at per diem rates of $150 or more, and hourly employees at rates of $18.75 or more.

United States
Synthetic Fuels Corporation

Statement of Administrative Expenses

February 1982

UNITED STATES SYNTHETIC FUELS CORPORATION

STATEMENT OF ADMINISTRATIVE EXPENSES

Prepared by
United States Synthetic Fuels Corporation
1900 L Street, N.W.
Washington, D.C. 20586

FEBRUARY 1982

UNITED STATES SYNTHETIC FUELS CORPORATION

STATEMENT OF ADMINISTRATIVE EXPENSES

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UNITED STATES SYNTHETIC FUELS CORPORATION

STATEMENT OF ADMINISTRATIVE EXPENSES

I. LEGISLATIVE BASIS

The United States Synthetic Fuels Corporation was established by Title I of the Energy Security Act (Public Law 96-294; 94 Stat. 611; 42 USC 8701 note) (the "Act") to provide financial assistance in achieving the national goal of synthetic fuel production capacity from domestic resources.

A. Purposes of the Act

The Act states the following purposes:

- improve the Nation's balance of payments;
- reduce the threat of economic disruption from oil supply interruptions; and
- increase the Nation's security by reducing its dependence upon imported oil.

The Act seeks to accomplish these purposes by:

- giving special consideration to the production of synthetic fuel which has national defense applications and expediting its initial development;
- accelerating the creation by the private sector of commercial synthetic fuel production facilities of diverse types with the aggregate capability to produce from domestic resources in an environmentally acceptable manner the national production goals set forth in the Act;
- providing for financial assistance, preferably on a contingent basis, to encourage and ensure the flow of capital funds to those sectors of the national economy which are important to the domestic production of synthetic fuel;
- encouraging private capital investment and activities in the development of domestic sources of synthetic fuel and fostering competition in the development of the nation's synthetic fuel resources;

- encouraging and supplementing but not competing with or supplanting private capital investments in the development of domestic sources of synthetic fuel; and
- creating the United States Synthetic Fuels Corporation, a Federal entity of limited duration, to provide financial assistance to undertake synthetic fuel projects.

B. The Corporation

The Corporation will use its financial incentives to accelerate development of a commercial synthetic fuels industry characterized by broad diversity and significant production capacity. Diversity of technologies is to sought within each domestic resource base that offers significant potential for use as a synthetic fuel feedstock. National production goals for the industry are set at 500,000 barrels of crude oil equivalent per day by 1987 and 2,000,000 barrels by 1992. Additional objectives of the Corporation call for a synthetic fuels industry to be developed with a maximum of fiscal responsibility and private sector competitiveness. The Corporation's ultimate success will depend on its ability to meet these several distinct objectives. The Corporation is implementing the Act's charge to encourage and supplement, rather than compete with or supplant, private capital investment in synthetic fuels.

C. Comprehensive Strategy

By the mid-1980's a compendium of projects funded by the Department of Energy's interim program or by the Corporation's limited assistance awards, and by the private sector alone, should be operating and providing valuable information and experience, particularly for the construction and start-up stages of such projects. Besides helping the Corporation in developing its comprehensive strategy, the resulting information also should aid private investors in determining how best to enter the synthetic fuels market and should support state and local government efforts to deal with a growing industry.

The comprehensive production strategy is integral to the two part approach of the Energy Security Act. The strategy must assess the experience of the first part of the program in light of existing and anticipated external conditions, and must directly address private sector responsibilities essential to meeting the national production goals.

The synthetic fuels program is a national program to meet national goals, but the key to its success is private enterprise initiative and involvement. Well-designed and efficiently managed projects should operate in a competitive marketplace. Thus, the private sector must take the lead in project concept, development, and management and must be willing to risk its own money. The Corporation initially intends to provide financial assistance only in measured amounts and as a last resort to cover clearly defined and extraordinary risks.

It is premature to predict which projects will be assisted by the Corporation or what their production or budgetary impact may be. Regardless, the financial resources available to the Corporation in its first stage activities under the Act, prudently managed within a well-conceived program, should make a significant contribution to both the diversity and production objectives of the Act.

UNITED STATES SYNTHETIC FUELS CORPORATION

STATEMENT OF ADMINISTRATIVE EXPENSES

II. RESOURCE SUMMARY

Activities of the Corporation are expected to increase significantly in FY 1982 and 1983 as the Corporation moves into final project selection under the Initial Solicitation. At its January 18, 1982 meeting, the Board of the Corporation determined that eleven projects were sufficiently developed to be evaluated for potential selection for the final stage of competition under the Corporation's Initial Solicitation. The Board is scheduled to make a further selection early in March; and until the Board makes that selection, the Corporation will not be able to develop budget projections with any degree of accuracy. Therefore, the following programmatic estimates may not necessarily represent the actual level of Corporation commitments.

Resource Summary
(Millions of Dollars)

	FY 81 Actual	FY 82 Estimate	FY 83 Projection
AUTHORITY			
Unused Program Authority	--	5,993	10,047
New Obligation Authority	6,000	8,579	-0-
Direct Appropriation	(6,000)	(6,212)	
Transfer from Dept. of Energy 1/		(2,367)	
TOTAL OBLIGATION AUTHORITY	6,000	14,572	10,047
ESTIMATED OBLIGATIONS/COMMITMENTS			
Administrative			
Administrative Services	7	19	27
Inspector General	--	2	2
Other (Generic Studies)	--	4	6
Project Assistance			
Financial Assistance 2/	-0-	4,500	8,000
Corporation Construction Projects	-0-	-0-	-0-
TOTAL OBLIGATIONS/COMMITMENTS	7	4,525	8,035
UNUSED AUTHORITY	5,993	10,047	2,012

1/ Estimate of uncommitted balance initially provided Dept. of Energy by the Act. Not shown here are funds already obligated by DOE.

2/ May not represent actual level of Corporation commitments, as indicated on the previous page.

III. PROGRAM STATUS

Although no programmatic commitments have been made as yet, significant progress has been made. The Synthetic Fuels Corporation has designed an approach to project selection to improve evaluation before commitment of Government funds, "solid" negotiations to fortify approved programs, and careful monitoring of project execution.

A. Solicitation and Receipt of Proposals

The Corporation issued its Initial Solicitation for proposals on November 21, 1980. Of the 63 proposals received under the Initial Solicitation, 36 were coal projects, 13 shale oil, 11 tar sands, one heavy oil, and two were hydrogen from water by electrolysis projects. These proposals employ a variety of technologies, processes, and resources, and were designed to produce a multiplicity of end products. Eleven of the 63 proposals are mature enough to be considered.

B. Evaluation Criteria and Procedures

Procedures adopted by the Board direct that proposals received in response to any solicitation undergo a two-phase evaluation process. During Phase I, projects are evaluated as to eligibility, maturity, and strength. The entire Phase I evaluation process should be completed in the near future and should lead to decisions by the Board on advancing some of these projects to Phase II in late February or early March, 1982. Phase II discussions with proposers will seek to define the potential amount and terms of any financial assistance the Corporation may provide, taking into consideration all other competing proposals.

During Phase I, the Corporation evaluates individual projects on the basis of three sets of criteria. First, the project must meet basic eligibility requirements as established by the Act. Second, the project must be sufficiently mature so that technical and financial uncertainties are within limits that permit systematic evaluation. Third, the project must appear technically and economically viable, with demonstrable markets for its products. Additionally, the project must demonstrate the potential for regulatory acceptability and sound management.

A mature project is characterized by the accomplishment of certain milestones, including the acquisition of rights to the plant site, the key technology, and the necessary resource (feedstock), utility, and water. A typical mature project will also have completed comprehensive financial viability and technical feasibility studies, and its design work will be sufficiently advanced to allow costs to be estimated with a high degree of accuracy during Phase II evaluation. Finally, participants in a mature project typically will have clearly outlined the estimated amounts and terms of commitments and will either have secured or can realistically expect to secure all necessary permits on a schedule that will allow project construction to begin immediately upon receipt of assistance.

An assessment of project strength will include consideration of a project's technological soundness, including its processing, auxiliary, environmental control facilities and scale-up risks. Additionally potential for replication, including the licensing of the technology and the extent and geographic distribution of the resource base, is a consideration. Strength assessment will display a project's management capability, including the sponsor's financial position and overall corporate management and project operating capability; and it will include a comprehensive economic viability study, to determine sponsor/project ability to meet all operating costs and provide debt service and equity return adequate to sustain the project. Other strength criteria include an evaluation of product marketability and project compliance with all federal and state socioeconomic, health and safety, and environmental regulations, laws and agreements.

Projects meeting all Phase I eligibility and maturity criteria and appearing attractive in terms of the strength criteria will be considered for Phase II evaluation. When the Board advances projects to Phase II in late February or early March, 1982, it is expected to establish parameters for competition among projects during that phase. At this point each project will be examined in depth on its intrinsic merits against any such parameters, on its relative strengths in terms of the foregoing criteria, and on its ability to advance the programmatic goals of the Corporation.

C. Second Solicitation and Subsequent Solicitations

The Corporation's Second Solicitation for proposals was issued by the Board of Directors on December 11, 1981, with a closing date of May 31, 1982. In late February or early March of 1982, when the Board advances certain projects to Phase II, the Board will also encourage certain other projects not being advanced to resubmit proposals under a subsequent solicitation. This will be done for projects that appear particularly promising but are not yet mature. Projects now competing under the Initial Solicitation but not selected may request to be reconsidered for Phase II under the Second Solicitation. To date, at least a dozen projects have indicated they will do so. The Corporation will maintain active files on any such project and review supplemental submissions as they are provided. Current planning indicates that, subject to the availability of funds and Board approval, there will be additional general solicitations following the closing for the Second Solicitation on a time-line as represented on Chart A (see p. 14).

The Board may decide to issue one or more targeted solicitations directed at particular resources or technologies, if this is judged to be the best way to further the objectives of the Energy Security Act.

D. Transfer of Projects from Department of Energy

At its meeting on December 11, 1981, the Board of Directors voted to accept the transfer of both the Union Oil Project and the Tosco Project from the Department of Energy to the Corporation, contingent on the Corporation's being declared operational by the President of the United States.

The Board took no action on the transfer of the Great Plains Project because of legislation precluding such transfer.

E. Diversity and Production

Through the first stage, the Act encourages diversity in order to lay a foundation of experience and information drawn from a wide array of potential synthetic fuels options. After the mid 1980's the intended direction is to be determined by the comprehensive strategy which is required by the Act. Any such expansion will necessarily rely heavily on private sector initiatives and investment in a wide range of projects, which in turn will be determined by the information and experience gained from early Corporation-assisted efforts.

The Corporation's planning and implementation processes are designed to advance the pre-1985 goals of the Act. The 63 project proposals received in response to the Initial Solicitation represent an encouragingly diverse mix of candidates. If necessary to develop a balanced portfolio of pioneer commercial plants, targeted solicitation and other measures will be considered by the Board.

The 11 projects considered by the Board in January to be sufficiently mature to undergo Phase I strength evaluations represent considerable diversity in terms of resources, technologies, locations and products. Charts B (page 15) and C (page 16) illustrate the diversity cross section of the original 63 projects and of the 11 projects now undergoing Phase I strength reviews.

F. Additional Corporate Objectives

In addition to setting diversity and production goals, the Act specified a number of other related objectives, including:

- o encouraging and assuring the flow of capital funds to those sectors of the national economy which are important to the domestic production of synthetic fuels;

- encouraging private capital investment and activities in the development of domestic sources of synthetic fuels and fostering competition in the development of synthetic fuels resources;
- encouraging and supplementing rather than competing with or supplanting private capital investments in domestic synthetic fuels projects;
- fostering greater energy security, reducing the nation's economic vulnerability to disruption of imported energy supplies, and giving special consideration to the production of synthetic fuels for national defense applications.

The Corporation's recognition of and response to these objectives are reflected in its project selection criteria. The criteria reflect the view that the Corporation should act as a catalyst for industry development. Based on the Corporation's use of limited financial assistance to support synthetic fuels projects that provide a foundation of technological experience and market development, a private sector industry should be able to evolve in an orderly fashion and with adequate capital formation.

The Act's objective of encouraging competition is supported in the Corporation's development of a multiple category evaluation process designed to reveal comparative differences among project proposals. By publishing a uniform set of project evaluation criteria in its solicitation documents, the Corporation has imposed a fair and enforceable set of standards for competitive project selections. Competition is expected to be especialy intense in the Phase II evaluation stage, when a number of candidate projects will be actively competing for the Corporation's assistance.

Among the project selection criteria adopted is a "credit elsewhere" test by which the Corporation will examine: (a) whether additional equity or debt capital could be raised from sponsors, institutions or the public without Corporation assistance consistent with the prudent business practices of such parties; and (b) whether the sponsors have exhausted all reasonable possibilities for raising capital on such a basis, including the sponsor's giving completion guarantees to potential investors.

Finally, progress toward the objective of fostering energy security and reducing the nation's economic vulnerability to energy import disruptions will be paced largely by overall progress toward our primary diversity and production objectives, although the solicitation documents do place special emphasis on production to meet defense needs. Even at this early stage the threat of competition from synthetic fuels has been cited by OPEC officials as a basis for price moderation.

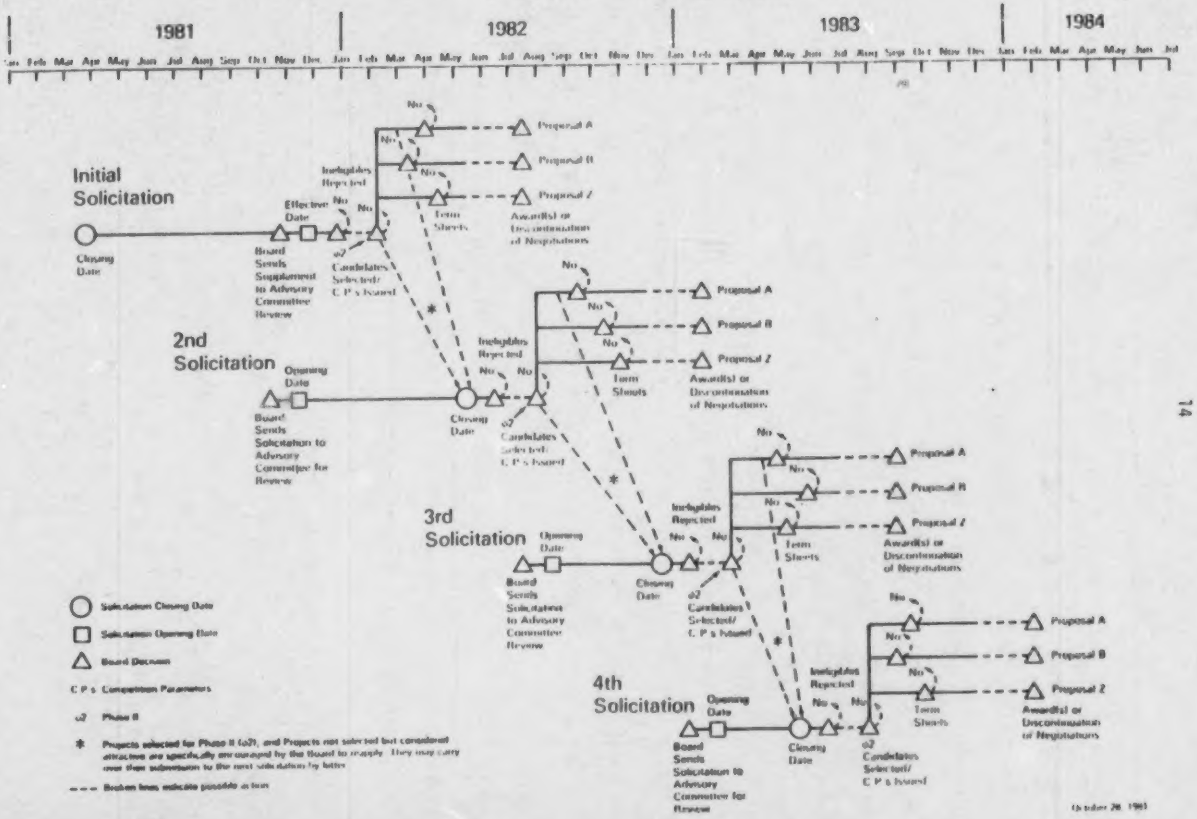
G. Regulatory Considerations

The synthetic fuels projects assisted by the Corporation will be the first of their kind, and although much has been written about their environmental and socioeconomic impacts, careful evaluation of their potential for compliance with regulatory requirements will be required.

Areas of concern which have been identified by applicable regulatory authorities include the potential emission of toxic substances in the production of synthetic fuels by assisted projects; the emission of increased quantities of controlled substances, like particulates and sulphur dioxide; the toxicity and disposal of solid wastes, like coal ash and spent shale; and the impact on water quality and availability. Socioeconomic concerns related to the proposed projects have been expressed by affected states and local governments.

In an effort to promote understanding and greater regulatory cooperation and compliance, personnel from the Corporation have been meeting on a regular basis with officials from the various states, counties, and local governments in which synthetic fuels plants are proposed. These meetings provide a means for exchanging information, expressing concerns, and providing input to the Corporation. During Phase II evaluations, beginning in the Spring of 1982, contact with state and local government officials will be intensified to provide more detailed information on the status of permits, licenses, and socioeconomic planning programs.

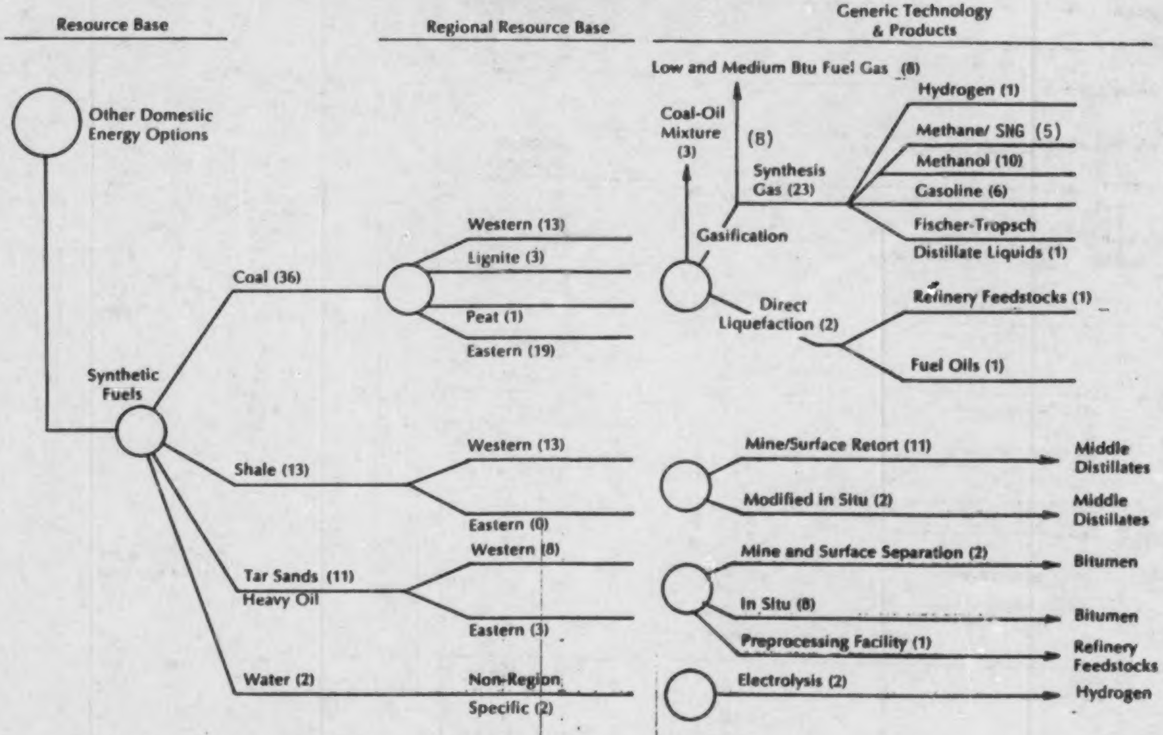
CHART A
GENERAL SOLICITATION PROCEDURES


1981
1982
1983
1984
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul
Initial Solicitation
Closing Date
Board Sends Supplement to Advisory Committee Review
Effective Date
No
ø2 Candidates Selected/ C P s Issued
Ineligibles Rejected
No
No
No
No
Term Sheets
Proposal A
Proposal B
Proposal Z
Award(s) or Discontinuation of Negotiations
*
2nd Solicitation
Board Sends Solicitation to Advisory Committee for Review
Opening Date
Closing Date
Ineligibles Rejected
No
No
ø2 Candidates Selected/ C P s Issued
No
No
No
Term Sheets
Proposal A
Proposal B
Proposal Z
Award(s) or Discontinuation of Negotiations
*
3rd Solicitation
Board Sends Solicitation to Advisory Committee Review
Opening Date
Closing Date
Ineligibles Rejected
No
No
ø2 Candidates Selected/ C P s Issued
No
No
No
Term Sheets
Proposal A
Proposal B
Proposal Z
Award(s) or Discontinuation of Negotiations
*
4th Solicitation
Board Sends Solicitation to Advisory Committee for Review
Opening Date
Closing Date
Ineligibles Rejected
No
No
ø2 Candidates Selected/ C P s Issued
No
No
No
Term Sheets
Proposal A
Proposal B
Proposal Z
Award(s) or Discontinuation of Negotiations
○ Solicitation Closing Date
□ Solicitation Opening Date
△ Board Decision
C P s Competition Parameters
ø2 Phase II
* Projects selected for Phase II (ø2), and Projects not selected but considered attractive are specifically encouraged by the Board to reapply. They may carry over their submission to the next solicitation by letter
--- Broken lines indicate possible action

October 28, 1981

CHART B

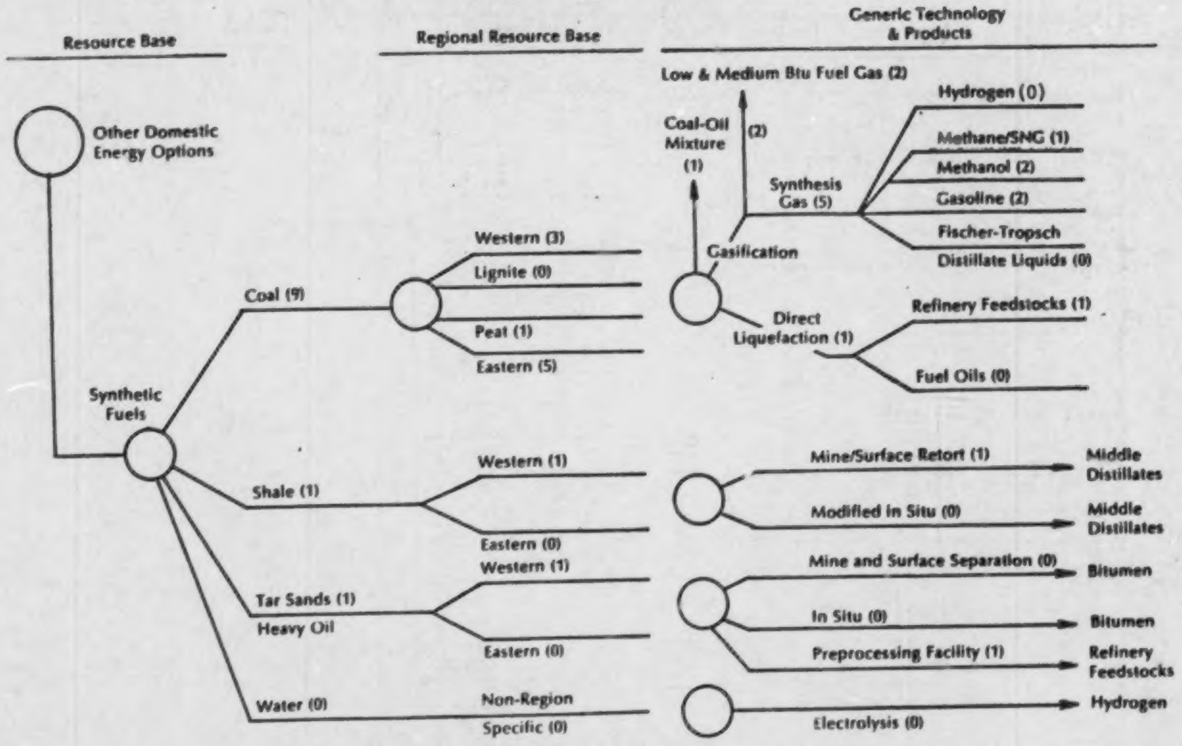
Diversity Cross Section of Original 63 Projects


Resource Base
Regional Resource Base
Generic Technology & Products
Other Domestic Energy Options
Synthetic Fuels
Coal (36)
Shale (13)
Tar Sands (11) Heavy Oil
Water (2)
Western (13)
Lignite (3)
Peat (1)
Eastern (19)
Western (13)
Eastern (0)
Western (8)
Eastern (3)
Non-Region Specific (2)
Low and Medium Btu Fuel Gas (8)
Coal-Oil Mixture (3)
(8)
Synthesis Gas (23)
Gasification
Hydrogen (1)
Methane/ SNG (5)
Methanol (10)
Gasoline (6)
Fischer-Tropsch Distillate Liquids (1)
Direct Liquefaction (2)
Refinery Feedstocks (1)
Fuel Oils (1)
Mine/Surface Retort (11)
Middle Distillates
Modified in Situ (2)
Middle Distillates
Mine and Surface Separation (2)
Bitumen
In Situ (8)
Bitumen
Preprocessing Facility (1)
Refinery Feedstocks
Electrolysis (2)
Hydrogen

(1) Not specifically classified

CHART C

Diversity Cross Section of Remaining 11 Projects


Resource Base
Regional Resource Base
Generic Technology & Products
Other Domestic Energy Options
Synthetic Fuels
Coal (9)
Shale (1)
Tar Sands (1)
Heavy Oil
Water (0)
Western (3)
Lignite (0)
Peat (1)
Eastern (5)
Western (1)
Eastern (0)
Western (1)
Eastern (0)
Non-Region Specific (0)
Low & Medium Btu Fuel Gas (2)
Coal-Oil Mixture (1)
(2)
Gasification
Synthesis Gas (5)
Hydrogen (0)
Methane/SNG (1)
Methanol (2)
Gasoline (2)
Fischer-Tropsch
Distillate Liquids (0)
Direct Liquefaction (1)
Refinery Feedstocks (1)
Fuel Oils (0)
Mine/Surface Retort (1)
Middle Distillates
Modified In Situ (0)
Middle Distillates
Mine and Surface Separation (0)
Bitumen
In Situ (0)
Bitumen
Preprocessing Facility (1)
Refinery Feedstocks
Electrolysis (0)
Hydrogen

UNITED STATES SYNTHETIC FUELS CORPORATION

STATEMENT OF ADMINISTRATIVE EXPENSES

IV. ADMINISTRATIVE EXPENSES

A. Authority and Procedures

Section 120(c) of the Energy Security Act (PL 96-294; 94 Stat. 611,640) authorizes the United States Synthetic Fuels Corporation to make expenditures for reasonable and necessary administrative expenses within certain statutory limitations in accordance with a detailed statement of such expenditures transmitted along with the President's proposed budget.

This statement presents the Corporation's current estimates of administrative expenses for fiscal year 1983.

The Corporation, characterized in the Act as a "Federal entity of limited duration," is categorized for budgetary accounting purposes as an "off-budget entity," in that its corporate financial transactions are not included in the receipts, expenditures, and deficit in the budget. However, Corporation funding derived from the Treasury is treated as an obligation and expenditure of the Treasury Department and thus enters into the budget.

President's Budget

The Office of Management and Budget has included certain information relative to the synthetic fuels program and OMB estimates of the Corporation's activities in Part IV, Off-Budget Entities, of the Appendix to the Budget of the United States Government for Fiscal Year 1983. The estimates of administrative expenses contained in this independent submission are somewhat lower than those published by the Ofice of Management and Budget, reflecting further analysis of anticipated workload conducted after the President's budget estimates were developed.

Limitations on Administrative Expenses

The statute sets forth the intent of Congress that the Corporation's expenditures for administrative expenses shall reflect due consideration for economy and efficiency. In addition to exercise of prudence and economy in its expenditures, the statute provides several constraints on the Corporation's administrative expenses.

Limitations on Funding

Within total funding made available through appropriation to the Energy Security Reserve in the Treasury Department, the Corporation is authorized to expend a stipulated maximum amount for administrative expenses in any one year. The maximum amount is initially stated at $35 million, which amount is adjusted annually by an amount equal to the change in the GNP implicit price deflator from fiscal year 1979. Pursuant to this statutory direction, the limitations on the Corporation's administrative expenditures in fiscal year 1982 will be $41,625,000, computed as follows:

GNP Implicit Price Deflator, Base Year 1979..........	162.77
GNP Implicit Price Deflator, 1981....................	193.58
Administrative Expenses Limitation for FY 1982......	$41,625,000

$(\$35{,}000{,}000 \times \frac{193.58}{162.77})$

The Corporation's current estimate of the limitation on administrative expenses for fiscal year 1983 is $44,919,000 based upon the assumption of an increase of 7.9% in the GNP implicit price deflator during 1982. The Corporation's projected fiscal year 1983 estimated funding for administrative expenses (exclusive of generic studies) is $28.3 million which is over 37% less than our statutory limit.

Limitations on Number of Employees

In addition to the statutory limitation on outlays for administrative expenses, section 117(d) of the Act provides that the Corporation is authorized to employ not more than 300 individuals in full-time professional positions at any time.

For budgetary purposes, the Corporation is estimating a full-time professional staff of 203 employees at the end of fiscal year 1983 and a total staff of 283 employees.

Sources of Funds

Corporation funds for its activities are derived from borrowings from the Energy Security Reserve fund established in the Treasury. The Supplemental Appropriations Act of 1980 appropriated $18,792,000,000 to the Energy Security Reserve, of which $17,522,000,000 was apportioned so as to provide:

- $6,000,000 available immediately (July 8, 1980);
- Up to $5,310,000,000 initially made available to the Department of Energy ($300 million of which was later

rescinded), insofar as not committed or conditionally committed by DOE; and

- $6,212,000,000 available after June 30, 1982.

In addition, the Corporation is authorized to charge and collect certain fees in connection with financial assistance provided under the Act, not to exceed 1 percent of the amount of such financial assistance, which fees may be applied against administrative expenses related to providing financial assistance.

Until such time as financial assistance is provided and administrative fees collected, the Corporation is defraying all administrative expenses out of funds borrowed from the Energy Security Reserve.

Although the Corporation is required to charge an annual loan guarantee fee of 1/2 of 1 percent in connection with loan guarantees, the proceeds of these fees are not available for administrative expenses.

Procedure for Drawing Treasury Funds

Section 151 of the Act authorizes the Corporation, to the extent provided in advance in appropriation acts, to issue its notes and other obligations to the United States of America acting by and through the Secretary of the Treasury. Pursuant to this provision, the Corporation and the Treasury Department entered into a Memorandum of Understanding that provides for funding such notes through a checks-paid letter of credit, under which the Treasury provides funds to the Corporation's commercial bank on a day-to-day basis to the extent required to cover checks presented for payment. In this manner, the Corporation is provided with funds actually required for its expenditures while at the same time minimizing the budget outlays of the Treasury and consequent need for Treasury borrowing from the public.

To further ensure that Federal outlays are held to the lowest practicable figure, the Corporation deposits all receipts and refunds immediately to the Energy Security Reserve fund in the Treasury so that such receipts and refunds may be used on a day-to-day basis in preference to drawing appropriated funds.

B. Corporate Organization

The Corporation's substantive activities are organized into three sequential phases following each solicitation of proposals. Phase I for each solicitation consists of the assessment and selection for further consideration of those proposed synthetic fuels projects which are most responsive to the solicitation and which are most likely to advance the purposes of the Act. Phase II will be devoted to further competition, the refinement of proposals, and the negotiation of appropriate financial assistance for those projects selected under Phase I. Phase III will be devoted to monitoring plant construction and the production of synthetic fuels by such plants. In limited circumstances the Corporation may also utilize a Corporation construction project to ensure that a particular type of plant is built prior to submission of the comprehensive strategy.

The Board of Directors and the Chairman of the Board exercise the authorities of the Corporation. The Board consists of the Chairman and six Directors, all of whom are appointed by the President of the United States by and with the advice and consent of the Senate. The powers of the Corporation are vested in the Board of Directors, except those functions, powers and duties vested in the Chairman by or pursuant to the Act. The Act gives the Chairman responsibility for the management and direction of the Corporation.

The Corporation was formed October 8, 1980, with the recess appointment of a Board of Directors by the President of the United States as provided in the Act. The President accepted resignations of all Board members on January 30, 1981. On May 26, 1981 Edward Noble took office as Chairman and on September 11, 1981 four additional Board members were confirmed. This comprises the present Board of five members. There are presently two vacancies on the Board. The President of the United States may declare the Corporation established and fully operational pursuant to Section 305(k)(1) of the Defense Production Act of 1950, as amended, on which date certain authorities of the Department of Energy under that Act are to be transferred to the Corporation. The President has not yet made such a declaration.

At its October 28, 1981 meeting, the Board approved an organization structure consisting of five major offices: (1) the Office of Projects; (2) the Office of General Counsel and Secretary; (3) the Office of Administration and Treasurer; (4) the Office of External Relations; and (5) the Office of the Inspector General. In addition to these major offices, there is also an Office of Planning.

Employment of a Project Matrix System makes the Office of Projects the focal point around which the principal corporate activity -- financial assistance to synthetic fuels projects -- revolves. The Office of Projects is subdivided into the following major subordinate offices: (1) the Office of

Technology and Engineering; (2) the Office of the Vice President for Projects; and (3) the Office of Finance.

C. Operations

In carrying out its responsibility to assist the private sector in accelerating the development of a synthetic fuels industry, the staff of the Corporation employs a "Project Matrix System."

The Project Matrix System is employed during each phase of Corporation activity through integrated project teams, employing assigned personnel from all relevant offices of the Corporation. Each project team is headed by a team leader assigned by the Senior Vice President for Projects. Each project team functions as a self-contained entity responsible for all aspects of one or more assigned projects.

Each team leader has overall responsibility for guiding a project within each of the three phases. Under the direction of the team leader, team members review and assess all relevant project material; make recommendations based upon their review and assessment; negotiate method, level, structuring of terms, and documentation of financial assistance; and develop appropriate systems and programs to monitor a project during construction and operation. Team leaders report to the Senior Vice President for Projects and direct the activities of all assigned team members. In carrying out their assigned duties and responsibilities as they relate to a specific project, individual project team members are responsible for advising their respective functional supervisors concerning the progress of all matters for which they are responsible as a project team member; team leaders are responsible for advising the Senior Vice President and/or Vice President for Projects.

D. Work Program by Organization

Executive Direction

Board of Directors

The United States Synthetic Fuels Corporation is governed by a Board of Directors, consisting of a Chairman and six members appointed by the President of the United States, by and with the advice and consent of the Senate.

The Chairman of the Board, who is also the Chief Executive Officer of the Corporation, is appointed for a seven-year term, devotes full working time to the affairs of the Corporation, and may hold no other salaried position. The other six members of the Board are initially appointed for decreasing terms of from six to one years so that the term of one member expires each year. Terms thereafter are to each be for a duration of seven years. Not more than four Directors can be members of any one political party.

President

Appointed by the Board, the President functions as the Chief Operating Officer and serves under the general direction of the Chairman. The President is responsible for the internal operations of the Corporation. The President is delegated to act by and for the Chairman during the Chairman's absence.

Senior Vice President for Projects

The Senior Vice President for Projects directs the staff in the Corporation with central responsibility for all aspects of projects in the Corporation including the solicitation and assessment of proposals, the negotiation and structuring of terms of assistance, and project monitoring during construction and operation. Assistance is provided by three Vice Presidents heading the offices of Projects, Engineering and Technology, and Finance with the following responsibilities:

V.P. for Projects

This office serves as the principal contact with project sponsors, prepares solicitations, manages the process for screening proposed projects, manages negotiations of individual transactions, develops ongoing relationships with industry and labor and develops and manages systems for monitoring project performance.

In addition, this office has responsibility for all other areas of projects other than those performed by Engineering and Technology and Finance. As such, this office includes four organizational subunits: Cost Analysis; Environmental, Health, Safety and Socioeconomic Matters; Marketing; and Labor and Manpower Relations. The staff of each subunit is involved at all stages of the project assessment and selection, negotiation and monitoring process.

The Cost Analysis group reviews the proposers' cost estimates focusing in detail on plant capital costs, plant start-up and testing costs, plant operating costs, contingency allowances, and plant expenditure profiles. For each project selected for negotiation, the Cost Analysis group will be responsible for assessing the probability that the project can be designed, constructed and operated for the cost estimated, and within the schedule proposed. The Cost Analysis group performs such assessments by reviewing the degree of definition of the engineering and design documents, the start-up and operation plans, the schedule details and the off-site facilities definition. This group will also assess the accuracy of the estimates by reviewing the quality of the cost estimating methodologies used by the proposers.

The Environmental, Health, Safety and Socioeconomic group has responsibility for reviewing project regulatory compliance in three areas: environmental, health and safety regulatory acceptability; water availability and quality; and socioeconomic impacts. Among some of the activities performed by this group are: review of project permitting status and water needs and rights; review of the proposers' monitoring and impact assessment plans; and sponsor plans to consult with local and state government entities and community groups.

The Marketing group has the responsibility of reviewing the proposers' marketing plans to sell the announced quantities of plant products and by-products at the prices suggested. Typical analyses performed by this group include: analysis of product competitiveness and product substitutability; quality of market identification and characterization, identification and status of purchase commitments and identification of requirements for preparation, transportation and distribution of product and by-products.

The Labor and Manpower Relations group has responsibility for evaluating labor force availability at each specific project site, including analysis of proposed manpower requirements, manpower supply, proposers' plans for training programs, and type of worker housing. This group will also evaluate the cumulative effects of several synthetic fuel construction sites within the same geographic area.

V.P. for Engineering and Technology

This Office has overall responsibility for evaluation of project engineering programs and proposed technologies and related management capabilities. It will assess technologies and engineering feasibility of projects, identify environmental issues, and support the development of synthetic fuels strategy. The Office will also provide support to other offices in the areas of monitoring of engineering, procurement, construction and operation throughout all phases of project activity.

For each project under serious consideration, this office will analyze the state of the development of the technologies used in the project, and identify the areas of risk, their magnitude and the provisions built into the project to mitigate these risks. In addition, this office will provide quantitative estimates of the effect of the use of technologies on cost and performance along with recommended contingencies which will be used in the financial and economic analyses of each project.

To achieve these objectives, this office will perform detailed reviews of technical soundness, management capability and each project's potential for replication. The reviews will be applied to the processing facilities, to the auxiliary facilities and to the environmental control facilities. Among the analyses performed by this office are a review of the technology selection, licensing conditions, performance guarantees provided by the suppliers of the technology; review of the operating history of the technology from laboratory through process demonstration and pilot plant to demonstration and commercial operation; an analysis of the project design basis and philosophy including the reliability and safety aspects of the plant. These detailed reviews allow this office to provide recommendations on the project's probability of meeting cost estimates, schedules and performance levels.

This office will also review the proposers' management plans including systems, procedures and programs to be used for monitoring and control of manhours, commitments, procurement activities, physical progress schedule and costs. Special attention will be paid to the experience and expertise of owner management, availability and commitment of key individuals, caliber of contractors and clear delineation of responsibilities and authorities among all parties involved in the design, procurement, construction and operation of the plant.

Finally, this office will analyze the potential for replication for any specific project, to be evaluated on the basis of the extent and geographical distribution of the particular resource used by the project and the prospect for widespread use of the proposed technology with the same resource or with similar resources.

This office will be involved in all steps of the project assessment, negotiation and monitoring process.

Office of Finance

The Office of Finance has overall responsibility for the financial aspects of all projects, including:

- the economic and financial viability of the projects over their estimated projected lives;
- the ability of project sponsors to fund their respective shares of project capital requirements;
- the reasonableness and adequacy of the proposed financing plans;
- the adequacy of collateral that may secure the Corporation's financing positions;
- the extent to which the sponsors bear a significant risk of loss in the event of project failure; and
- the form and minimum amount of Corporation financial assistance, if any, that is required to make each project viable.

Finance provides expertise to management and the project teams regarding financial matters during the negotiation and structuring of assistance awards. This includes the development of negotiating strategies and the evaluation of proposed public and private offerings, bank term loans, and construction and short-term financing plans.

Regarding the Corporation's evaluation of projects, Finance provides economic and financial comparisons of projects, both within resource and technology categories and across those categories. This includes an analysis of the amounts, types and terms of possible Corporation financial assistance.

The Office of Finance has developed an integrated computer system called the Synfuels Project Analysis Network ("SPAN") to assist Corporation staff during the technical and financial analysis of projects. SPAN combines elements of several existing commercial software systems and data bases to assess project economics, sponsor resources and possible Corporation assistance. Its data base management subsystem stores project-specific information for access by senior management and staff to assist project evaluation throughout the Corporation's award process.

Among the major risks that Finance may evaluate on a project-specific basis are:

- o size of the project relative to company size;
- o uncertainty in final cost of the plant;
- o construction delays;
- o plant performance; and
- o price of product and marketability of production.

General Counsel

The General Counsel is the chief legal officer and serves as Secretary of the Corporation. The Office of General Counsel provides advice on all legal matters and actions as well as documentation for agreements of the Corporation. The office also provides advice and support to project teams during all phases of project activity, as well as legal counsel and support to all other offices of the Corporation. The General Counsel also rules on appeals from denials of requests for information submitted to the Corporation.

As Corporate Secretary the General Counsel keeps and maintains minutes of Board meetings, provides notice of meetings and ensures that all books, reports, statements and other documents and records required by law are properly kept and filed.

Specifically, in Phase I, the Office of General Counsel reviews the project proposals and advises on the legal eligibility of the proposed project. The office will also aid in the legal interpretation of the various maturity and strength criteria as the project is considered for advancement to Phase II. In Phase II, the office will assist in the intensive discussions to be conducted with each project sponsor and the structuring and documentation of each agreement for financial assistance. In Phase III, the office will advise on all legal matters affecting the proper monitoring of Corporation-assisted projects.

External Relations

The Office of External Relations is responsible for public information and liaison activities with congressional members, committees and staff as well as other federal, state and local government entities, industry organizations and the communications media. The manner in which this office communicates and works with each of these constituencies is outlined in the following paragraphs.

Congressional

The Director of House Relations and the Director of Senate Relations act as the Corporation's representatives to members of the House of Representatives and the Senate, and their staffs. This includes responses to inquiries from Capitol Hill offices, coordinating responses to congressional mail and providing information pertinent to the programs and operations of this Corporation to congressional members. Meetings or briefings between the staff of the Corporation and staffs of the House and Senate members, or between members of the Corporation's Board and Members of Congress require the preparation of briefing materials, testimony for congessional hearings involving the Corporation and support documents. Tne Director of House Relations or the Director of Senate Relations will accompany Corporation officers or Board Members to these meetings and/or hearings, and prepare debriefing memoranda to inform affected Corporation staff members of issues raised there.

Industry

The liaison activities of the Industry Relations Director include a systematic monitoring of those companies with a high level of interest in synthetic fuels. Surveying individual companies on their attitudes toward the Synthetic Fuels Corporation and synthetic fuels development allows this office to identify potential problems. The industry relations office also maintains ongoing relationships with organized industry groups and associations, including monthly meetings witn representatives from the most important of these (API, NCA, AMC, AGA, RMOGA, and National Council.) The liaison function includes attendance and participation in conferences and meetings, when appropriate, and advising other SFC departments of appropriate opportunities for participation in industry-sponsored events. The Industry Relations director maintains written communication with industry in order to provide the necessary information from this Corporation to interested parties. The office also arranges for officers of the Corporation to meet regularly with industry representatives in order to maintain a dialogue on issues of mutual interest.

Media

The Office of Media Relations coordinates all communication with the news media whether local, trade or national; electronic or print. This office is reponsible for providing information about the programs, operations and policies of the Corporation to the press upon request or by Corporation initiative. Additionally, the Director of Media Relations serves as spokesman for the corporation to the press. News releases, press advisories and opinion articles are prepared and distributed by this office and press briefings are designed and moderated by Office of Media Relations personnel. The Director of Media Relations is also responsible for advising corporation officials and members of the Board of Directors in all matters relating to press appearances, interviews and comments. All requests for press interviews of corporate principals are processed by the Office of Media Relations.

State/Local Government

The Director of State and Local Government Relations meets with state and local representatives with respect to the socioeconomic, water and environmental feasibility of projects proposed in their states and localities. This office meets with governors' representatives, state and local permitting and planning agencies, environmental groups and attends town meetings with concerned citizens. The findings of this office are directed to the project file and included in the consideration process of the projects office. The Director of State and Local Government Relations is also responsible for responding to correspondence from state and local government representatives and citizens of site-specific areas. This office maintains files on each project and communicates the progress and operations of the Corporation to the members of state and local constituencies.

Administration

The Vice President for Administration and Treasurer is responsible for providing the full range of administrative support to the Corporation, including management systems, budgeting, accounting, procurement, personnel and administrative services as well as for implementing the Corporation's public disclosure program. Expenses for administrative support provide for staff and for certain administrative services obtained by contract.

Principal efforts during FY 1982 and FY 1983 involve the further development of internal management systems necessary to support the Corporation in its project assistance commitments. Particular attention will be given to the areas of financial management and control of funds with the design and implementation in early FY 1983 of an automated accounting system to replace the interim manual system. This automated system will both enhance internal funds control and allow the tracking of the Corporation's project financial commitments by the Projects Office to be integrated for management and reporting purposes.

Personnel systems will also be completed and employee benefits and personnel policies and procedures will be installed. Also planned is a strong employee development program to be designed around specific Corporation and individual employee needs.

Administrative services will continue to be provided centrally to all Corporation elements thereby eliminating the need for administrative support components within the various departments. Administrative services include facilities and property management, small purchases, office services, mailroom and receiving , reprographics, supplies, and security. The workload for these functions will depend heavily upon the level of program activities they support.

Requests for information under the Corporation's public disclosure guidelines will continue to increase greatly in both scope and complexity as current projects proceed through the selection process and additional projects are considered as a result of subsequent solicitations.

During FY 1983, some increase in staffing and contractual assistance will be needed to accommodate the full staffing of the Corporation and to support the increased program activities. However, this percentage increase will be somewhat less than that required for the program areas.

Central Administrative Costs

This includes those costs common to the entire organization which have not been allocated specifically to individual offices, such as security, overtime utility charges, postage, insurance, non-programmatic data processing, maintenance of word processing system, and rental of telecommunications systems.

As our Financial Management System is further developed, some of these items will be allocated to various organizational units.

Management Information

Involves the integration of Data Processing, Word Processing, Correspondence Control, and information tracking systems utilizing a data base management approach. Design of these systems is at an early stage of development in most areas.

Contracting/Procurement

Involves development of contract and procurement policy, and the negotiation and administration of contractual arrangement with individuals and/or firms.

In addition, the procurement function includes the purchase, inventory, maintenance, and disposal of capital equipment and consummable supplies.

Associated Administrative Support Functions

Includes telecommunications, mail and delivery, graphics, photocopying, supplies and inventory, and other support functions as may be deemed appropriate.

Planning

The Director of Planning is responsible for developing and assessing alternatives for the Corporation's near and long term planning and programmatic decisions, including the Comprehensive Strategy which the Energy Security Act requires the Corporation's Board to submit for Congressional approval by mid-1984.

These responsibilities involve the analysis of issues, trends, and events relevant to program development and integration. Among subjects to be considered are energy markets and technology; economic, environmental and socioeconomic factors; and energy, economic, and national security. Also included are analysis and formulation of Corporation policy alternatives, development and maintenance of significant information to serve programmatic needs and analysis and oversight of the synthetic fuels security program, and other corporate staff functions as assigned.

The development of the Comprehensive Strategy implies an evolutionary process that illustrates the analytical and program integration involvement of the Planning Office. The Comprehensive Strategy must organize information, analyses, and findings bearing on: the Corporation's objectives and schedules for their achievement; the status of private sector developments and the relative responsibilities of the Corporation and the private sector for achieving the purposes of the Energy Security Act; an investment strategy prospectus setting forth the justification to support any requested appropriations; the limitations and timetable for the Corporation's involvement and eventual termination; interpretations of available economic, technological, and environmental experience regarding the synthetic fuels industry; and recommendation regarding technologies and resources to be encompassed within the Corporation's strategic plans.

Inspector General

The Act provides for the appointment of an Inspector General and a Deputy Inspector General by the President of the United States, by and with the advice and consent of the Senate. The Inspector General is under the general supervision of the Board of Directors, and reports directly to the Board and to the Congress.

The Inspector General is responsible for promoting economy and efficiency in the administration of the Corporation's programs and for preventing and detecting fraud and abuse in the operations of the Corporation. The Inspector General is also responsible for determining the extent to which such programs and operations are in compliance with the Act and consonant with its objectives. To these ends, the Act authorizes the Inspector General to supervise, coordinate and provide policy direction for audits, investigations and inspections of Corporate activities and to employ such personnel or consultants as he deems necessary to carry them out. The Inspector General is guaranteed access to all Corporation records, documents and other information and may request information and assistance from any Federal, State or local governmental agency. Furthermore, the Inspector General is authorized to compel by subpoena the production of information necessary in the performance of his duties. Finally, the Inspector General is required to prepare an annual report as well as such other reports as are requested by Congress or judged desirable by the Inspector General.

The Inspector General is authorized to expend up to $2,000,000 annually on reasonable and necessary administrative expenses. This limit is subject to an annual increase for inflation. The Corporation provides office space to the Inspector General under the Corporation's statutory obligation.

E. Staffing Status

Most of the staffing of the Corporation for full operation will occur during the last three quarters of FY 1982, particularly near the end of the year when SFC will be a) monitoring the projects transferred from DOE, b) starting the monitoring of projects resulting from the first solicitation, and c) negotiating arrangements under the second solicitation. An estimated 40% of the new staff recruited in FY 1982 will be in the Projects Office which has the staff leadership responsibility for the SFC program activities.

In FY 1983, in addition to the activities growing out of the first two solicitations, SFC will also be processing proposals under the third, and possibly a fourth, solicitation. FY 1983 estimated staffing needs represent the full staffing now foreseen as required under existing conditions. The number of staff is expected to be about 30% above the FY 1982 year-end total. Most of this increase is projected to occur in the Projects Office.

This full staffing level projection includes 203 professionals, which is approximately 33% under the statutory ceiling of 300. The ability of the Corporation to rely upon such a small number of staff, however, will be determined by the extent to which we are able to compete in the marketplace for the recruitment and retention of the qualified, experienced personnel needed to carry on the business of the Corporation.

Staffing Status (Full-time Regular)

	End Strength								
	FY 1981 Actual			FY 1982 Estimate			FY 1983 Projection		
	Exempt	Non-Exempt	Total	Exempt	Non-Exempt	Total	Exempt	Non-Exempt	Total
Chairman/President	6	5	11	7	6	13	7	6	13
General Counsel	7	5	12	9	5	14	10	5	15
Administration/Treasurer	12	9	21	26	22	48	26	27	53
Planning	5	2	7	9	2	11	9	2	11
External Relations	14	2	16	14	3	17	16	3	19
Technology and Engineering	4	1	5	11	5	16	16	7	23
Finance	7	3	10	14	4	18	18	4	22
Projects	20	6	26	53	14	67	92	23	115
Corporate Subtotal	75	33	108	143	61	204	194	77	271
Inspector General	0	1	1	9	3	12	9	3	12
GRAND TOTAL	75	34	109	152	64	216	203	80	283

F. Resources by Organization

The following chart displays a distribution of resources by Corporate element:

ADMINISTRATIVE EXPENSES
By Organization Unit
(Thousands of Dollars)

Unit	FY 1982 Estimate	FY 1983 Projection
I. Administrative Costs:		
CEO/COO	1,599	1,575
Board	365	355
General Counsel	1,087	1,258
Administration	2,562	3,090
Administrative Pool	1,075	1,733
Planning	943	1,213
External Relations	1,261	1,449
Tech. & Engineering	1,233	1,853
Finance	2,769	3,474
Projects	5,724	10,363
Subtotal	18,618	26,363
Inspector General	1,920	1,928
Total Administrative	20,538	28,291
II. Generic Studies		
Planning	425	500
Tech. & Engineering	390	490
Projects	3,152	5,233
Subtotal	3,967	6,223
III. Grand Total	24,505	34,514
IV. President's Budget	24,505	35,507

G. Resource Summary by Object of Expenses

Insofar as practicable, the Corporation provides for the categorization of its administrative expenses, for purposes of presentation to Congress, in the standard object classification prescribed for federal agencies.

The following table shows estimated expenses for the various object classes in FY 1982, and projected expenses for the same object classes in FY 1983. Increases in the projected expenses for the same object classes of personnel compensation, travel, communication, utilities, security and other rent, printing and reproduction, and supplies and materials all reflect the projected 30% increase in staffing during FY 1983, as described in Section (E) above. Reductions in projected expenses in the object classes of transportation of things and of equipment reflect the facts that the Corporation will have located in its permanent headquarters and satisfied most of its equipment needs during FY 1982.

Resource Summary by Object of Expenses

(Thousands of Dollars)

		FY 1982 Estimate	FY 1983 Projection
1.	Personnel Compensation	10,635	16,126
2.	Travel	1,272	1,865
3.	Transportation of Tnings	805	741
4.	Communication, Utilities, and other Rent ..	3,489	5,646
5.	Printing and Reproduction	306	406
6.	Other Contractual Services	2,925	2,914
7.	Supplies and Materials	140	180
8.	Equipment	966	413
9.	TOTAL	20,538	28,291
	Generic Studies	3,967	6,223
10.	GRAND TOTAL	24,505	34,514

UNITED STATES SYNTHETIC FUELS CORPORATION

STATEMENT OF ADMINISTRATIVE EXPENSES

V. GENERIC STUDIES

A. Resource Summary (Millions of Dollars)

FY 1982 Estimate	FY 1983 Projection
4.0	6.2

Generic studies funding will provide for the use of contractor expertise in selected areas to aid in the planning and execution of the Corporation tasks. Examples of types of studies and analysis to be conducted in FY 1983 are as follows:

B. Project Evaluation Phase

During the project evaluation phase, current plans include the establishment of a cost data base containing information on approximately seventy-five projects. Specifically, data will be gathered on subsystem and major equipment unit costs as well as cost estimating factors for shale, coal liquefaction, coal gasification, and tar sands technologies. This cost data base will aid in preliminary evaluation of proposal capital and operating costs, proposal schedules and construction expenditure profiles, and proposal contingency provisons and plant start-up costs. A better understanding of all these costs will help in determining the economic viability of each proposal and in comparing the quality of the cost information submitted in each proposal. As a result, the Corporation will develop a unique source of information on cost baselines and factors for synfuel plant equipment, process, environmental requirements, feedstocks, labor productivity, etc. The data base will use a standardized code of cost accounts which will allow quick project comparison.

C. Project Negotiation Phase

Contractor expertise will be sought in the course of project negotiation in three major areas:

- o cost analysis
- o technical analysis
- o environmental, health, safety and socioeconomic analysis

Cost contractor expertise will assist in the following areas during the project negotiation phase: (1) Cost assessments detailing the capital start-up and operating cost estimates provided by a proposer, followed by an analysis of the reasonableness of those costs. Cost contingencies will be assessed and cost uncertainty profiles will be derived to be used as inputs to the detailed financial analysis supporting the project negotiations. These detailed project cost assessments will allow SFC project negotiation teams to measure the probability that the projects can be designed, constructed and operated for the cost estimated, and within the schedule estimated; (2) Various cost analyses as required during project negotiations, including cost engineering trade-off analyses between different plant configuration options; contingency analysis of various technology risks and cost impact analysis of different socioeconomic scenarios.

Outside engineering expertise will be used to review detailed process engineering diagrams for very specific and unique processes; check heat and material balances and performance data submitted by proposers and provide expert engineering assistance on pollution control systems and system reliability. Outside consulting assistance will be used to analyze a project's compliance with all environmental, health, safety and socioeconomic regulations; assess risks and evaluate the cumulative impacts and related constraints of multiple projects in a given region. In the environmental, health, safety and socioeconomic area, contractors will carry out the tasks through the review of data supplied by a proposer, through the conduct of short-term studies and surveys, and by providing expert advice during negotiations.

D. Project Monitoring Phase

Technical contractor expertise will be used during the project monitoring phase to review process design and drawings and assess changes in a project's scope of work. Accounting expertise will be sought for auditing eligible project expenditures, certification of project disbursement milestones, review of sponsors' project management systems, validation of the quality of reports, and evaluations. Finally, outside expertise will continue to be used during this phase to review the environmental and socioeconomic impacts of the projects selected for financial assistance, and provide the data necessary for satisfactory compliance with contractual obligations.

The CHAIRMAN. Mr. Noble, I think you were here for the opening of the hearing today, when I made a statement. I addressed some specific questions. I wonder if you have those questions before you, or if you noted them at the time?

Mr. NOBLE. I have a note here, yes sir, about the award strategy. I think that was one of the questions. The question on the diversity, the question on the EMB activities——

The CHAIRMAN. I will have staff give you a copy of those questions so that you may respond to them.

Mr. NOBLE. The first question is what is the award strategy being pursued by the Board of Directors, including. when and on what basis the financial awards will be paid?

The award strategy is based, as you know, on a kind of a two-phased program whereby we first, in our first phase we examine what we call the eligibility, the maturity, and the strength of these projects. After the projects have passed this first phase, evaluating these eligibility, maturity and strength, then we will proceed to the negotiation for the awards, and at that point we do consider all the questions in more detail; such as the credit question. We have all of the other things we think pretty well set, and then we move to the negotiations, and if we are able to satisfactorily negotiate this with their proper equity and we feel their ability to proceed with the project with the proper management, the proper financial strength, then we will make the award, and I think that pretty well sums up our process, and this has been approved by our Board.

We do obtain the awards, I mean we obtain the projects, as you know, through the solicitation process.

The CHAIRMAN. Did you make new solicitations?

Mr. NOBLE. We made, the original solicitation was made by the first Board that was here, and there was some question on certain portions of the validity. We did have a supplement to that first solicitation, but basically it is the solicitation of the first Board. It was on a temporary basis here.

We have made a second solicitation which went out and was approved by the Board on December 11, and that closes on May the 31. The projects that do not pass all of the maturity or strength criteria are able to drop down into that second solicitation as well as any new solicitations.

The CHAIRMAN. Is the first solicitation closed?

Mr. NOBLE. The first solicitation is closed. The second solicitation was open as of December 11.

The CHAIRMAN. When do you expect to make decisions with respect to the first solicitation?

Mr. NOBLE. We will be passing on the strength criteria, the strength criteria will be presented to the Board at the next meeting on the 16, and then we expect the Board to approve those projects which will be moved into phase 2 in the second meeting which will be some time early March.

The CHAIRMAN. So the decision to move from phase one to phase two will not occur until some time in March?

Mr. NOBLE. That is correct. Recommendations will be made to the Board on the February 16.

The CHAIRMAN. Is that with respect to the first solicitation?

Mr. NOBLE. With respect to the first solicitation, yes, sir.

The CHAIRMAN. Thank you, and the second solicitation does not close until May 31?

Mr. NOBLE. That is correct.

The CHAIRMAN. You will not be acting upon any of the responses on the second solicitation until after that date?

Mr. NOBLE. That is correct, unless we ask them to submit additional information or things such as we did in the first solicitation.

The CHAIRMAN. When do you expect to be able to move through the second phase? How long is it going to take to move through the second phase, and make some kind of contract award?

Mr. NOBLE. I think we would probably possibly have some awards by early summer, and some of those will be, maybe we will not finish negotiation until possibly fall or so, but we will move as rapidly as we can with due prudence in negotiating the strength in the projects.

The CHAIRMAN. Would you go ahead with the rest of the questions?

Mr. NOBLE. All right, sir. "What is the approach being adopted by the Board of Directors to the achievement of the statutory goal of diversity as well as production?"

We have looked at both—the diversity question, as you know, relates not only to the resource base but the technology and the geographic diversity.

The staff has recommended to the Board, and I frankly agree with that recommendation, that the long-term production goals will be met more effectively we think by pursuing diversity somewhat over production. Now this has not been passed on by the Board, but the staff has made this recommendation, and we anticipate that the Board will make their own decision possibly in the next meeting. Does that answer that question sufficiently?

"How successful has the Corporation been in avoiding unauthorized activities, for example, Energy Mobilization Board type activities? Reportedly there is an agreement between the Corporation and the Environmental Protection Agency providing for the detail of EPA employees to the Corporation. However, there is a statutory requirement that the EPA, Department of Energy, and other Federal agencies deal with the Corporation as if it were a private corporation. Does detail of EPA employees to the Corporation call into question whether EPA as a regulatory agency will be provided access to what otherwise would be considered proprietary information?"

That is two or three questions, but first of all, we have no consideration whatsoever to reconstitute the EMB. If that is done, Congress will have to do it.

What we are doing, sir, is trying to determine that the sponsors are cooperating in developing their environmental, monitoring plans, both with the State and Federal officials, as those people are constituted to review those plans, so ours is merely a catalyst to help in the coordination of the necessary permitting and so forth required by the State and the Federal officials, and to that extent, we are working with the sponsors, with the Governor, with the State and local people. Beyond that, we are not at all trying to reinstate the EMB.

Now to what extent the detail of the employees of EPA to the Corporation—this is an attempt on our part, we do have three environmental technologists or engineers. We will be adding to that, but one of the things that I have really tried very hard not to do is to build a bureaucracy here, and to the extent possible we will use the EPA employees on a detail basis, and we have worked out at least a memorandum of understanding with the EPA to do that.

The reason for that is that the EPA does have some very qualified people in this area. They are experienced in this area, and our greatest need will be when we are evaluating the monitoring plans of the projects, and our feeling is that we can get these people detailed to us, we pay for their costs while they are with us, but at the same time we are not going to be building up a bureaucracy here in this Corporation. That was the purpose of our reaching this agreement with EPA.

The other way to do that would be to build in-house staff which we feel would be unnecessary and a bit bureaucratic.

The third way would be to enter into contract agreements with outside organizations, and again I think this would be much more expensive than the route that we are taking.

The CHAIRMAN. Our concern has to be this, Mr. Noble. The Synthetic Fuels Corporation is an independent corporation. It is not a governmental agency in the traditional form, dealing at arms length with the industries and with the Government.

You have shortened that arm on one side. I am not sure that that is good or bad, but it is not what Congress intended at the time the Synthetic Fuels Corporation was set up. You have created or are in the process of creating a relationship between the Synthetic Fuels Corporation and EPA that no other industry has. I would think that there would be substantial concern on the part of people on all sides of the issue of environmental protection as to whether or not you are compromised or EPA is compromised by the kind of relationship which you are structuring. I can understand your desire not to build up a bureaucracy unnecessarily. However, suppose one of the companies with which you deal, or perhaps one with which you don't deal, desires to set up some kind of a synthetic fuels or other energy entity? They have a much different relationship with EPA than they would if they come through the Synthetic Fuels Corporation; is that not correct?

Mr. NOBLE. I don't think they would. I can assure you we are going to maintain our independence.

The CHAIRMAN. How are you going to maintain your independence if part of your decisionmaking process is built upon judgments of the people that are employed by EPA?

Mr. NOBLE. Well, we will have on board some very good technical people ourselves.

The CHAIRMAN. So does Exxon.

Mr. NOBLE. To give us an independent view.

The CHAIRMAN. So does Exxon, and I won't pick on them. They are just the first that comes to mind. I am sure that they would like very much to have EPA working inside their shop so that the EPA is co-opted by the time they get to a decision.

Mr. NOBLE. I can understand your concern, sir, but I personally feel that we are not trying to set up the monitoring plans ourselves but really to see that the corporations have properly set these in effect, and I think it could actually speed it up to some degree if EPA was into the loop at the outset. I hope they wouldn't be compromised, and I can see your concern.

The **CHAIRMAN**. Does this indicate that you intend to have detailees from other governmental agencies or departments?

Mr. **NOBLE**. Not at this time; I would ask Mr. Schroeder if he would like to comment on that.

Mr. **SCHROEDER**. Mr. Chairman, we control the work that the detailees are doing for the Synthetic Fuels Corporation. Nothing is done except by written instruction from the Corporation to the Environmental Protection Agency.

The **CHAIRMAN**. Are you going to get detailed people from USDA, the Forest Service if as a matter of fact the project is on Forest Service lands, or detailed people from the BLM if it is on other public lands?

Mr. **SCHROEDER**. No, sir. Actually these evaluations will be managed by our people in the Corporation. On some of the technical work we need support on because of the scale of the program at this time. We had 68 different projects that we were looking at, and those now are down to 11, and very soon they will be down to a manageable number and enable us to move ahead.

We felt that we had some weaknesses in the technical areas and we did not have enough people to take into consideration all these questions, some of which we didn't know, and that is the reason for the memorandum of understanding.

The **CHAIRMAN**. I am not satisfied at all with that explanation. I understand why you would desire to reach in and pull out the expertise of someone else. That is not what Congress created when they created a Synthetic Fuels Corporation to be an independent agency outside of Government and not an extension of the DOE, not an extension of the Defense Production Act, not an extension of the Forest Service, or the BLM, or the Corps of Engineers. Or are you going to get detailed personnel from the Corps of Engineers to deal with water pollution and discharge questions with respect to these industries? Where do you draw the line? You have started, where do you stop?

We said stop at the beginning and now you have said no, we want to get a little pregnant.

Mr. **NOBLE**. Well, it is a judgmental question, but in struggling to not have a bureaucracy here and have people that are just going to be working part time and not getting into some very extensive outside contracts, this is what we feel, and I think that the people that we do have can keep this independence, and I don't know of any other areas that we have in mind other than this one particular area.

Mr. **INK**. This won't fully answer your question either, but the people who are detailed to us, while they are detailed, they function under our supervision. They are bound by our confidentiality rules, and they are responsible to us, and they function as our employees, and are empowered to do only what we are empowered to do.

The detailing does not carry with them as I am sure the chairman recognizes any authority or responsibility from the agency from which they are detailed.

The CHAIRMAN. I am not satisfied. I don't want to belabor that, and I don't want to take the time of my colleagues unduly. I hope you will review the statutory authority and the legislative history, and I think if you do that you might arrive at a different conclusion. I hope you will do that. I know that we will.

Rather than take the time of the committee at this time, let me yield at this time to Senator Melcher for a few questions.

Senator MELCHER. Thank you very much, Mr. Chairman. Mr. Noble, your testimony goes into the details of what you are doing to implement the Corporation's activities regarding fossil fuel reserves, and you state that 90 percent of our country's fossil fuel reserves are coal and oil shale.

I am not aware that you have taken any consideration so far of a plan that would develop central baseload electric power generation. Am I correct in that?

Mr. NOBLE. Well, you are speaking of MHD?

Senator MELCHER. Yes; I am going to speak about it.

Mr. NOBLE. We have no projects, as I understand it, that have that technique involved.

Senator MELCHER. Now the Montana Power people, a private utility company in Montana, have been dealing with the Department of Energy on a proposal for using MHD in a topping cycle in their next powerplant construction.

As you know, or I hope you are aware, that MHD by definition in the bill, in the act, is a synthetic fuel. Are you aware of that?

Mr. NOBLE. Yes, sir.

Senator MELCHER. Now it appears to us that since there is absolutely nothing that you are doing that deals with probably the most pressing problem facing us in energy right now, what to do about the future needs for central baseload electric generation and the apparent collapse of nuclear plants under construction, that this is an area that the Corporation should be very much interested in, and what is the next step to efficiently use the fossil fuels in generating electricity.

Am I pursuing a line that is adverse to the Corporation's policy or current thinking?

Mr. NOBLE. No, sir; I am not a technician. I understand that this is a technique which may increase the efficiency, but we don't have any projects that have been proposed in this area, so we can only deal with what we have in front of us. We have no aversion to it, but we don't have any projects I don't believe that deal with it.

Senator MELCHER. Then you would, I take it, consider a joint venture with Montana Power or other utility companies as far as that goes? You might cooperate with them?

Mr. NOBLE. Under the act we have to consider it. I would have to say that joint ventures by the act itself are the last choice, and it would certainly be my last choice.

Senator MELCHER. I can understand that, but I think you understand the financing and rate base structure of a private utility company which would require that it be a joint venture.

Mr. NOBLE. Well, yes, sir; I do, and all I would have to say is that we would have to look at that when it came before us. It is not before us and has not been put before us, so I really wouldn't speculate on any decision that the Board might make without having one before us.

Senator MELCHER. Have you had any discussion on this matter with Secretary Edwards or any representative of the White House?

Mr. NOBLE. No, sir; I have not.

Senator MELCHER. Perhaps we can correct that then. There has been a proposal by Montana Power and any other utility company that may be interested in joining them for a very modest $5.6 million to run the preliminary study and design for such a topping cycle in their next powerplant which would be constructed at the beginning of 1987.

Is that the type of effort you would like to pursue with private industry?

Mr. NOBLE. I just would have to look at it, Senator, to see if it comes within the purview of the statutes that we have to operate under. If it is research and development, we would not, so I just have to look at it to see if it comes within the statutes we are operating under.

Senator MELCHER. I wouldn't want to play any word games with you, Mr. Noble, but I think some of the development that we are looking at, that you have found, what is it, $8 billion?

Mr. NOBLE. That is correct.

Senator MELCHER. Is far, far from anything but development and may or may not prove cost effective in the long run.

What we are addressing here is perhaps a very major, in my judgment at least, a very major gap in what we are doing in development of our capability for generation of power. We have nothing on board that would lead us to believe that at any time in this decade we would even begin to look at a proposal that might lead to more efficient use of power or more efficient production of power and utilization of fossil fuels, so nothing what you have said about joint ventures being your last choice, let me point out that when we were dealing with this act in Congress, we found it absolutely essential if we were going to include private utility companies becoming part of the opportunity that might be presented to the Board, we had to use, or presented to the Corporation, we had to use the joint venture route, recognizing their rate base structure and their financing structure, so we took the only practical way that we could deal with it in terms of the private utility companies, so I would hope that when this application is before you, and for a very modest amount, that you will find within the act the liberty of making the judgment of participating with it because otherwise I see nothing coming onstream of any development nature during the next 5 or 6 years.

Thank you very much.

Mr. NOBLE. Senator, I don't prejudice any decision, so certainly when it comes before us we will consider it.

Senator MELCHER. Thank you very much.

Mr. NOBLE. The next question that was on here, if you want to go ahead with that or someone else has another question?

Senator **Warner** [presiding]. The chairman had to depart for a leadership meeting, and I am going to ask what is the desire of the members? I have one or two questions.

Senator **Nickles**. I have a couple of questions.

Senator **Warner**. It would be my inclination that you will be asked to put these into the record, and we will proceed now to ask for individual questions.

Mr. **Noble**. There are some questions here that the Senator, he may—is he coming back? Does he want these answered just for the record?

Senator **Warner**. Why don't you just give us the general answers to them and then please amplify in the record?

Mr. **Noble**. All right, sir. The next question that he had here is there are reports that consideration is being given to establishment of an advisory committee to the Board of Directors with the directive to examine the need for the Corporation and the appropriateness of its statutory goals: "I would like to know the truth in this regard. If such a proposal is being considered, it would call into question the commitment of the Board of Directors to proceed expeditiously to fulfill its statutory mandate."

First of all, we are not calling it an advisory committee, although I guess it is because we do in fact have a, quote: advisory committee made up of the Secretary of the Treasury, Interior, Defense, Energy, and the head of the EPA, but we are calling this a panel which is made up of experts. It is a study panel, and this is a technique that I have used in the private sector. I think it has been a good one.

What we have done here is bring together. We have not done it yet—people in the financial, economic, and technical areas, that all affect synthetic fuel development. These are people who are eminent in their field, dedicated Americans who we are calling on to not ask to direct the program or slow anything down. We have actually given them a set of questions that we have. We think that maybe they will have things that they will suggest to us, and I think that any time that you are involved in something new as we are here that the help and information that we can get, if it is just one good idea, may be of tremendous importance to the overall future of the development of this program.

These are people who we think are eminent in their field, coming here for very little cost. If you had to hire these people on a consulting basis—they are people that just want to make a contribution basically to their country, and I think that we will get a lot out of this study panel as we call it. We think that if just a few good ideas come out of that, that it will be very helpful, and I am looking forward to the input that they will have, but it is not anything that is set up to slow anything down, but rather to let us more effectively look at the forest while we are working as hard as we are looking at all the trees.

Senator **Warner**. I want to make a comment here, and I think it is shared by other members of the committee. We don't want any impediment to the progress on these awards. We want to get on with making these awards. Are you giving us assurance now that this advisory panel will not slow down that process?

Mr. **Noble**. This advisory panel is set up really to just let some people that are very knowledgeable in the field, in the financial area, economic area, and the technical area, to give us the benefit of their expertise, and we also have asked them to disclose in advance any biases that they have or any conflicts that they may have so that we know exactly where they are coming from, but I think it is the type of input that is really needed by any new venture, and Mr. Schroeder and I have both found this type of approach has been very helpful.

Senator **Warner**. Will you provide for the record the names of the individuals that are in this group?

Mr. **Noble**. I will be happy to, and I will be happy to send you the questions that we have asked them and the letter that we have written them.

Senator **Warner**. That should be definitely part of the questions.

Mr. **Noble**. But to be definitely specific, this is not an effort, and we anticipate it will help us not slow anything down.

Senator **Warner**. You are now proceeding to the final question here?

Mr. **Noble**. Finally:

> Is the Corporation contemplating a contract negotiation strategy that will insure sufficient commitment by the sponsors of synthetic fuel projects to assure the completion of the projects selected by the Board to receive financial assistance?

I guess the answer to that is "Yes," we are doing everything that we can to develop a program that will insure the commitment of the project sponsors both in the analysis of their ability to fulfill this commitment, and their management, both financial and management capabilities.

Senator **Warner**. The statute provides that you are to give priority to those projects where the States have indicated they intend to expedite licensing. How do you intend to make such a determination?

Mr. **Noble**. Well, we have had some 350-plus meetings with our State and local external relations people, and we are getting now a very good feedback with the States that want the programs, that want to cooperate and work with the sponsors, that want to correctly expedite any permitting.

I don't mean that thoughtlessly, but to expedite the permitting so that we don't slow the construction and that sort of thing. We are getting a good feedback.

Senator **Warner**. Feedback is one thing, but is what the State representatives will do being made a part of your record in each case? Are monitoring that to see if they are on track?

Mr. **Noble**. We have got a record of virtually everything that we are doing as far as the meetings with the State and local officials.

Senator **Warner**. I want to turn to a subject that is of great interest to me, and that is oil shale. Of course, you have this one loan guarantee to the Utah Corp. Give me your thoughts on shale oil.

By way of introduction, I honestly believe that it is essential to this country that we establish some threshold of knowledge in this technology over and above the small pilot projects that we have developed so far as a nation, privately, publicly, or quasi-public, and that we have got to bring in one of these substantial projects so that we have a baseline should this country ever be confronted with a situation particularly brought on by deterioration in our supply of oil to meet national defense needs. We might have to turn to shale as a resource very quickly. Although shale at some point might not be economically competitive in the marketplace, it is essential as a nation that we establish this baseline in terms of the ability to extract shale oil, if for no other reason than to meet our national defense requirements.

What are your feelings on that?

Mr. NOBLE. Well, I have said, and it may be a little trivial, that you don't wait until it rains to fix a leaky roof, and you don't wait for another Middle East crisis to establish a crash program in synthetic fuels. I do think that it is important that we develop this technology, that we begin to develop the infrastructure for the industry, and this the marketplace would do if you had plenty of time.

I think that by moving prudently and expeditiously, and responsibly, that we can get this infrastructure started by the program and set up in the Synthetic Fuel Corp., and to that extent we are going to move just as quickly as we can to get this done.

Senator WARNER. If the marketplace were to decline in such a way that it wouldn't justify the private expenditures, are you prepared to come in and try and complete at least one project so we have that baseline?

Mr. NOBLE. I think we are already under way.

Senator WARNER. In one area?

Mr. NOBLE. You have got two shale projects already approved by the DOE which as of yesterday were transferred to us from the monitoring standpoint, and those are two pretty good sized projects.

Senator WARNER. I am familiar with both of them and have visited both.

Mr. NOBLE. So one is, as you know, a purchase agreement where the Government puts nothing up until the product is delivered. The other is a loan guarantee, so I think you will have a lot of knowledge in those two plants alone, and that doesn't preclude other plants, but I think that by taking the diversity method that we are going to allow ourselves to develop this infrastructure and maybe do it in such a way that we will also get a lot more information both on the socioeconomic and the environmental impacts and a lot of things, and the questions that we really don't have answered at this point.

Senator WARNER. We need those answers. I will now turn to Senator Nickles and I will ask you to assume the chair as well as the questions.

Senator NICKLES [presiding]. Thank you, Mr. Chairman. I will be happy to. A couple of questions—you stated yesterday the Synfuels Corp. has now taken over monitoring of both the Union Oil and TOSCO?

Mr. NOBLE. Yes, sir. When the President declared us operational yesterday, the board had voted to accept those two projects from the monitoring standpoint.

Senator NICKLES. Are both of those oil shale projects?

Mr. NOBLE. That is correct.

Senator Nickles. Is it correct that TOSCO has a $1.1 billion loan guarantee?

Mr. Noble. I believe it is $1.2 billion.

Senator Nickles. Now the total cost of the project is much more than that, isn't it?

Mr. Noble. That is correct. Yes, sir.

Senator Nickles. Could you give me a little more detail?

Mr. Noble. TOSCO owns 40 percent of the project. Exxon, which is financing their part totally on their own, owns 60 percent of the project.

Senator Nickles. And so is that $1.2 billion or TOSCO's portion are going to have a loan guarantee?

Mr. Noble. That is three-fourths of TOSCO's project. They have to put up 25 percent equity in themselves.

Senator Nickles. Is the Government putting up that three-fourths or is the private sector?

Mr. Noble. The private sector has to put up 25 percent equity. The Government is putting up the 75 percent loan guarantee.

Senator Nickles. What is the total?

Mr. Noble. Of the 40 percent, in other words, 30 percent of the total; 75 percent of 40 percent, or 30 percent.

Senator Nickles. You lost me. What is the total project? What is the TOSCO project? What is Exxon and TOSCO together?

Mr. Noble. It will be something over $3 billion.

Mr. Schroeder. I will answer in just a second. I don't have that figure.

Mr. Noble. That is assuming their present cost estimate holds.

Senator Nickles. This is where I am coming from. My real question is, how is the loan guarantee going to work? Exxon is putting up the biggest share of the money and TOSCO is putting up a smaller portion of the money of which a great deal of that money is guaranteed by the Federal Government. So are they borrowing the money from the private sector at the commercial rate with a Government guarantee or on a percentage of that loan?

Mr. Noble. The Government through the Federal Finance Bank, the Energy Security Reserve, guarantees to the people and banks and so forth that loan the money. I think that is the way it works.

Senator Nickles. So they are able to go to FFB and borrow?

Mr. Noble. They don't go to them.

Senator Nickles. Does the FFB go to the marketplace?

Mr. Noble. The banks and lending institutions will get the guarantee of the loan.

Senator Nickles. OK, so there is no outlay of Government dollars involved unless they default on the loan?

Mr. Noble. That is correct.

Senator Nickles. Would there be any default on the loan, unless the entire project collapsed?

Mr. Noble. Exxon as I remember now, we did not negotiate this deal. We did have our team sitting observing most of it, but we did not negotiate it, but as I remember the facts, TOSCO, if they cannot meet a cash call, Exxon has the right to come in and pick up that portion of it, and then they have an agreement on the payback of that cash call that they have to meet. It is a rather intricate formula, but Exxon does have the right to step in in place of—we can supply that for the record if you wish.

Senator NICKLES. I would appreciate it.

[Subsequent to the hearing the Synthetic Fuels Corporation supplied the following:]

The operating agreement between Exxon and TOSCO provides that Exxon may carry the interest of TOSCO upon failure of TOSCO to fund cash calls required by the project and to obtain, after certain conditions have been satisfied, a portion of the revenues of Oil Shale in proportion to the amount of cash call covered. A more specific explanation follows.

If Oil Shale fails to meet a cash call, then so long as Exxon desires to continue the project, Exxon shall cover Oil Shale's defaults. If Exxon does not elect to cover Oil Shale's defaults within 30 days, the Colony Project will be terminated.

When Exxon covers Oil Shale, the amount advanced is considered as a loan for a period of 12 months; during these 12 months, Exxon charges interest. If Oil Shale has not repaid its loan within the 12 month period, part of Oil Shale's share in the project is transferred to Exxon and the loan and interest charges associated with it are nullified. Oil Shale's share transferred to Exxon is equal to 1.5 times the amount of loan divided by the total project capital expense determined at the end of the project start-up period.

At the time when shale oil is produced and sold, Exxon will receive its new increased share of total plant revenues until the cumulative amount of increases in revenues (resulting from its increased share in ownership) equal 1.5 times the amount of the loan. At that time, the loan is said to be recouped. At the time of recoupment, one half of the share transferred reverts to Oil Shale, which then increases Oil Shale's participation in total plant revenues.

If Exxon shall have carried TOSCO, after Exxon has recouped 150% of any amounts advanced from the net proceed of shale oil sale, TOSCO will retain a minimum interest of at least 20% even if TOSCO fails to advance any funds at any time.

Senator NICKLES. I haven't seen it exactly. I have heard that it is $1.1 or $1.2 billion in loan guarantees, but I haven't seen exactly how that would operate, particularly if there was a default with the partnership that we have with Exxon. As far as I am assuming, under most loan guarantees the Federal Government would have to call on those assets, whatever it would, be, but since you have a partnership with Exxon, I am not really sure exactly how that would work.

Mr. NOBLE. Exxon has an agreement between themselves and TOSCO that they can step in. I don't think they have to, but they have the right to. Is that correct?

Mr. SCHROEDER. No. It is not finalized yet. The total amount of the project is about $4 billion.

Senator NICKLES. A $4 billion project?

Mr. SCHROEDER. Yes, sir, and they are in the process of bringing the estimate up to what they call a class A estimate. At that time it is my understanding Exxon and TOSCO will finalize their joint venture contracts.

Senator Nickles. At what stage is it?

Mr. Noble. Exxon has really not made the commitment to go ahead yet.

Senator Nickles. That was my question. At what stage is this project?

Mr. Schroeder. They are working on the project.

Senator Nickles. It is still in the paperwork stage? Have they started building or clearing land?

Mr. Schroeder. They have actually started the mining, and the chairman and several others have been to the mine. As I understood, Senator Warner has been to the mine, and they are building some of the infrastructure now. They have built some of the housing, and the program is moving on as if Exxon is committed to it, but we are told that the contract has not been finalized yet.

Senator Nickles. And so there are no price guarantees or anything. The Government involvement today is a total of $1.1 or $2 billion as far as the loan guarantees. Is it set up to where that could continually escalate? Are they going to be able to come back to you and say Mr. Chairman, I underestimated the cost and now we are looking at what, a $6 billion project instead of a $4 billion project and so we are going to need another $800 million in loan guarantees? Is this likely to happen?

Mr. Noble. I think at that point, we would have to take a second look at it. I believe that is correct. We would have the right to take a second look at it if they come back for increases over what the DOE has agreed to. We start a new ballgame at that point in time.

Senator Nickles. Is there any similarity to this project from the one in Canada that I believe was also an oil shale project, the tar sands? That is a tar sands project.

Mr. Noble. Well, the Sun project, they have financed that solely themselves, the oil sands and what is the other?

Mr. Schroeder. I don't remember the name of the third project that is under consideration now. We have visited the Sun project and we have flown over it.

Senator Nickles. In Canada?

Mr. Schroeder. Yes, and we have flown over the other two, one of which is operating, and that is the oil sands project, and then the big one that is being considered now, a $15 billion project. Somebody handed me a note that it is Syncrude—it is an enormous plant. Those are different processes totally. The oil sands in Canada are what is called water bearing sand, and the oil is on the outside of the grain of sand that has water on it, and so it is much more easily separated than is oil from shale, and the oil in the oil sands that we have in this country which are——

Mr. Noble. Wet.

Senator Nickles. To get to the TOSCO project, and I will keep it strictly on TOSCO, are they estimating that they will be able to produce a product that will be economically marketable? In other words, would it be able to compete in the marketplace without Government price support in a particular project?

Mr. **Noble**. The estimates, I think their initial estimates showed that, and I don't believe they have totally finished their final estimates.

Mr. **Schroeder**. That's right.

Senator **Nickles**. When is the completion schedule?

Mr. **Schroeder**. I think Ralph Bayrer is right here. Ralph is not here. He left. I believe it is 1987, Senator.

Senator **Nickles**. So, whatever they estimate the market price of oil will be, then you are thinking they will be able to compete?

Do you have any idea what that price might be?

Mr. **Schroeder**. No, sir, I don't.

Senator **Nickles**. My concern is if they are estimating, let's say a higher dollar price, and I have heard prices for oil from the oil shale process are going to have to be $50 or $60? Is that close?

Mr. **Schroeder**. That is very high I believe.

Senator **Nickles**. Is it too high?

Mr. **Schroeder**. I believe it is.

Senator **Nickles**. What will they be able to produce? My question is if the oil is left in the marketplace, in effect will they default on the loan?

Mr. **Noble**. The preliminary estimates that we saw showed that they can do it actually less than the present price of oil.

Senator **Nickles**. Less than $30?

Mr. **Noble**. Yes, sir, but now as I say, Exxon said a year ago that they would not be finalizing their detailed estimates until late spring or even early summer, and they had not as I understand yet finalized those figures.

Senator **Nickles**. I was wondering, with the moderation that we have seen in the price of oil, actually since we have seen a decline, if this was going to, one, increase the likelihood of a default or Government exposure to this type of loss, or, possibly Exxon and TOSCO's abandonment of the project at this stage?

Mr. **Noble**. I don't think we could speculate on that, Senator.

Senator **Nickles**. Let me turn around—the Union Oil project has a price guarantee, is that correct?

Mr. **Noble**. That is correct.

Senator **Nickles**. At what prices are we guaranteeing that we will buy it? Do we have a fixed price that says yes, if you produce so many barrels a day?

Mr. **Noble**. Its initial module is I think 10,000 barrels, yes, sir. They can expand it to 50,000, but their initial module I believe is 10,000 barrels a day.

Senator **Nickles**. What type of guarantee do we give them?

Mr. **Noble**. This was negotiated by DOE. It has a formula that relates both to the price of fuel oil and inflation from a base price of oil.

Do you know what the base price was?

Mr. **Schroeder**. I think it was $32.50, I mean $42.50. It is based on 25 percent on the price of natural gas and 75 percent of it is based on the curve that was drawn to go with the contract.

Mr. **Noble**. Then there is a recoup feature, if at some point before the project runs out time-wise, that if it goes beyond this hypothetical number, then they have a recoup figure, but at this point it does not look like that recoup figure will materialize.

Senator **Nickles**. So, I guess what I am hearing you say is, yes. You are taking what the market price of oil is and saying well, that will be 75 percent of it, diesel oil or whatever, and so much for natural gas—then estimate the plant will be finished in 7 or 8 years—estimate what the prices will be at that time with escalators, with decontrol, and with all the other factors that are put together. Do you come up with a dollar figure that says in 1987, we will pay $60 a barrel? I am looking for a dollar figure if there is one.

Mr. **Noble**. Maximum exposure is $400 million.

Senator **Nickles**. What does that figure, maximum exposure mean?

Mr. **Schroeder**. Cumulative basis.

Senator **Nickles**. Maximum, then they never get more from the Federal Government?

Mr. **Noble**. That is correct. That is the maximum figure, and we had nothing to do with negotiating that contract.

Senator **Nickles**. Does that come out to a dollar figure per barrel? Do you come up with an estimate of saying yes, in 1987, we will guarantee you 57 or 60 or whatever it would be with all these escalating figures?

Mr. **Noble**. It is paid as they produce the oil based on the time and the formula, and they have to meet a certain production. I believe it is 75 percent of what they are estimating or something of that nature. They have to within a 2-year timeframe—I have forgotten the details of it in specifics, but as I say, we just merely sat in on part of the negotiations. We did not negotiate this contract.

Senator **Nickles**. Here again, to try and get back to the idea of——

Mr. **Noble**. The maximum exposure is $400 million.

Senator **Nickles**. Does that equate to a price per barrel?

Mr. **Schroeder**. It does, Senator Nickles, but it is not possible to quote that price per barrel since part of the price per barrel is dependent on the price of natural gas at that time, and that there is an incline drawn that escalates the price of oil that is guaranteed in the contract, and then that is affected, that affects 75 percent of the price of that oil, and then on top of that you have the 25.

Senator **Nickles**. Can you tell me what the estimates are for oil?

Mr. **Schroeder**. I can furnish them for you.

Senator **Nickles**. I would appreciate it, and then I will tell you where I am coming from on the other standpoint.

[Subsequent to the hearing the Synthetic Fuels Corporation supplied the following:]

*The pricing formula indeed relates to a price per barrel that is always dependent on what the contract refers to as a "base price," i.e., $42.50/BBL for finished products such as diesel and aviation fuel. This base price is escalated each quarter based on 75% of the GNP implicit price deflator and 25% of the percentage change in natural gas prices paid by electric power stations across the U.S., as recorded in a DOE index.

For example, if the GNP deflator is posted at 8% and natural gas prices rose 5% during any quarter of the Agreement, the "guarantee price" would be calculated as follows:

.75 (8%) + .25 (5%) = 7.25%

7.25% ($42.50) = $3.08 + 42.50 = 45.58/BBL

for the guarantee price that quarter. It is important to note that the $42.50 is always used as the "base price" to calculate guarantee prices and the increases applied to the $42.50 are not cumulative.

In the case of Union, the Department of Energy utilized an oil price estimate which reflected the low to medium scenario published by its Energy Information Administration which predicts that prices for distillate fuels such as diesel will range between $42 - 60/BBL through 1990.

Senator NICKLES. One question, I am concerned about the Federal Government having this liability, whether it is $400 million, or the $1.1 billion, or $1.2 billion. I am concerned about that type of liability—and alluded to it, Mr. Chairman, in your statement. You said yes, we want to send the signals. We want to let the OPEC countries know that yes, we have this oil and we have the techniques and the processes available to develop it. But I think we are also sending the wrong signal if we send a signal saying yes, we will guarantee Union Oil or whoever it is that yes, if you produce this oil in 1987 we will pay you $50 a barrel according to our formula, or $60 a barrel. To me you are almost inviting the door to say yes, you are only charging $32 a barrel today in the OPEC countries, and we are telling you we can't produce it economically or viably or marketably, synfuels, at 60 some, and it is almost an invitation to see what they can do.

Market circumstances changing from what they are today, I am concerned about not setting a lid but I am concerned about inviting an increase to that lid.

Mr. NOBLE. Senator, you are expressing a concern that I have also expressed a number of times in talks that I have had, and this is one reason that I have advised to try to be as selective as we can because in the statement that I gave, if we find that the constant value that we can establish the viability of these synfuels is $100 a barrel, that is an absolute invitation to coming in and raising prices as well as the club under the table.

If we show that the viability is at $25 a barrel, then we establish the fact that beyond this point, given inflation as a constant-dollar value, if we can establish the viability at a lower value, then we give a good signal and give pause that it does not raise prices.

On the other hand, if we choose badly, it is a two-way street, and I am very concerned that we select these projects as responsibly as we can.

Senator **Nickles**. I certainly concur, and I'm glad that you also have that approach because I know it has been debated in the industry—the pluses and minuses of these figures. So I would encourage you when you are coming up and dealing with contracts on price guarantees, especially when you are talking about the outyears. I have heard a lot of industry people say yes, we have to have some price guarantees because we have no idea when OPEC might rapidly increase production and the price would fall out. They could bankrupt and we would have none whatsoever, if we had that type of going to work of the price guarantee feature as an inducement, I would hope that we would keep that very close to what the market price is today so we don't encourage the price 7 years from now to climb up to whatever that magic figure may be—the same question concerning natural gas, and so on, and trying to tie them to other types of fuel sometimes to me is counterproductive, and we really should be allowing the marketplace to determine those prices.

One additional question, am I correct, we did not move the Great Plains project under the Corporation?

Mr. **Noble**. That is correct. It is statutorily removed from our jurisdiction.

Senator **Nickles**. Did the Congress pass something last year to keep that under DOE?

Mr. **Noble**. That is correct; yes, sir.

Senator **Nickles**. Do you think it should be under the Corporation?

Mr. **Noble**. I will let the Senate and the Congress make those decisions, Senator. Since we don't have that question before us, I think it would be speculative what the Board would do.

Senator **Nickles**. On the projects that you have before you now, you started out with 48. How many are you down to now?

Mr. **Schroeder**. Eleven.

Senator **Nickles**. And do all 11——

Mr. **Schroeder**. Pardon me. That is 11 not counting the Great Plains and the 2 shale plants.

Senator **Nickles**. Of the 11, is it anticipated all would receive some type of Government participation in some manner or are you still in screening?

Mr. **Noble**. We do not anticipate that all of these projects will pass at this time. If they don't, they can reapply under the second solicitation, but no, we are not sure that all of them will.

Senator **Nickles**. Do you have a short synopsis of those 11, the companies, the process?

Mr. **Noble**. We can furnish that to you.

Senator **Nickles**. The dollars that they are requesting, the type of assistance they are requesting.

Mr. **Noble**. Yes, sir.

[Subsequent to the hearing the Synthetic Fuels Corporation supplied the following:]

U.S. Synthetic Fuels Corporation
Annual Report 1981

Project Descriptions and Status Reports

The following 11 projects were chosen by the Board of Directors to undergo project strength evaluations by the staff. Recommendations on each will be made to the Board in February 1982.

The *Coolwater* project will produce medium Btu gas using a Texaco gasifier. The gas is then used to produce electricity using an integrated combined cycle. Construction of the plant began in December 1981. The plant, in Daggett, California, has an initial capacity of 4,300 barrels per day of oil equivalent in 1984, with additional capacity to 7,036 barrels by 1988. The project is sponsored by Texaco, Southern California Edison Company, Electric Power Research Institute, Inc., Bechtel Power Corporation, General Electric Company, JCWP, and the Empire State Electric Energy Research Company. The sponsors are seeking price guarantees.

The *Memphis* project will produce medium Btu industrial fuel gas using the U-gas gasifier. Located in Memphis, Tennessee, the project is scheduled for construction start-up in the fourth quarter of 1982. Plant capacity will be 8,400 barrels per day of oil equivalent, beginning in 1984. The project is sponsored by the Memphis Light, Gas and Water utility, which is requesting both loan and price guarantees.

The *WyCoal* project will produce synthetic natural gas from coal in Douglas, Wyoming. The conversion process consists of Lurgi fixed-bed gasification, followed by gas clean-up, shifting, acid removal, and finally methane synthesis. Start of construction is scheduled for April 1983. The plant's initial capacity will be 13,500 barrels per day of oil equivalent starting in 1986, with expansion to 27,000 barrels in 1988. The project is sponsored by WyCoal Gas, Inc., a Panhandle Eastern Company. Both loan and price guarantees are sought.

The *Breckinridge* project will produce a full complement of refinery feedstocks using the H-Coal direct liquefaction process in Breckinridge County, Kentucky. Construction start-up is scheduled for the fourth quarter of 1983. Plant capacity will be 49,800 barrels per day of oil equivalent starting in 1989. The project sponsors are Ashland Synthetic Fuels, Inc. and Bechtel Petroleum, Inc. They are requesting a loan guarantee.

The *First Colony* project, located in Creswell, North Carolina, will produce methanol from peat using the KBW gasification process followed by the ICI synthesis process to covert the synthetic gas into methanol. Start of construction is scheduled for the fourth quarter of 1982. Plant capacity will be 1,900 barrels per day of oil equivalent starting in 1985. The project is sponsored by Peat Methanol Associates, made up of the Energy Transition Corporation, Koppers Company, and J. B. Sunderland. The sponsor is asking loan and price guarantees.

The *Hampshire* project will produce gasoline from coal in Campbell County, Wyoming. The process consists of gasifying coal in Lurgi and KBW gasifiers, followed by gas cleaning, shifting, acid gas removal, methanol synthesis and conversion of the methanol to gasoline by the Mobil MTG process. Start of construction is scheduled for mid-1983. Plant capacity will be 19,293 barrels per day of oil equivalent starting in 1987. The project sponsor, Hampshire, is a joint venture of Kaneb Services, Inc., Koppers Company, Northwestern Mutual Life Insurance Company, Metropolitan Life Insurance Company, and Standard Oil of Ohio. Loan and price guarantees are requested.

The *Northern Alabama* project will produce methanol from coal in Murphy Hill, Alabama. The process consists of gasifying coal in a Koppers-Totzek entrained bed gasifier, followed by shifting, acid gas removal and methanol synthesis. Start of construction is scheduled for the first quarter of 1983. Plant capacity will be 12,000 barrels per day of oil equivalent coming on line in late 1986. The project sponsors are Santa Fe International, Kidder Peabody, and Air Products and Chemicals. They are requesting both loan and price guarantees.

The *Tennessee Synfuels* project, located in Oak Ridge, will produce gasoline from coal. The processes to be used include KBW gasification followed by the ICI methanol synthesis process followed by the Mobil MTG gasoline process. Start of construction is scheduled for the third quarter of 1983. The plant's initial capacity will be 7,691 barrels per day of oil equivalent in 1985, with expansion to 50,000 barrels per day in 1988. The project sponsor is Tennessee Synfuels Associates, a joint venture of Koppers Synfuels Corpo-

ration and Citgo Synfuels, Inc. Loan and price guarantees are sought.

The *Paraho* project will produce shale crude using room and pillar mining followed by surface retorting using the Paraho process. Located in Uintah County, Utah, project construction is scheduled to begin in mid-1982. Initial capacity will be 10,000 barrels per day by 1984, with expansion to 30,000 barrels by mid-1985. The project is sponsored by the Paraho Development Corporation, which is requesting both loan and price guarantees.

The *Calsyn* project will use the Dynacracking process to upgrade heavy oil and bitumen from tar sands for refining in a conventional petroleum refinery. Construction is scheduled to begin 1-2 months after an award is received from the Corporation. The plant will be located in Pittsburg, California. Plant capacity is approximately 5,100 barrels per day starting in late 1983 or early 1984. The project sponsor is Calsyn, a joint venture of Tenneco Oil Company, CDC Oil and Gas, Ltd, Alberta Oil Sands Technology and Research Authority, and Dynalectron Corporation. The sponsor is requesting a loan guarantee.

The *CoaLiquid* project in Shelbyville, Kentucky will produce a coal-oil mixture using the CoaLiquid technology. The plant, which is fully constructed, is producing 1,000 barrels per day. The project is sponsored by CoaLiquid, Inc., which is asking for price guarantees.

Senator NICKLES. I would very much appreciate it, and I think other members of the committee might also.

With that, and the idea that we will keep the record open to ask you additional questions [1] for the record, we will adjourn this meeting, and we thank you for your cooperation.

The hearing is adjourned.

[Whereupon, at 12:35 p.m., the hearing was adjourned.]

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[1] See app. III, p. 460, for responses to additional committee questions.

APPENDIX II

RESPONSES FROM MR. MACCLEERY TO ADDITIONAL COMMITTEE QUESTIONS

JAMES A. MC CLURE, IDAHO, CHAIRMAN

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WENDELL H. FORD, KY.
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SPARK M. MATSUNAGA, HAWAII
JOHN MELCHER, MONT.
PAUL E. TSONGAS, MASS.
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MICHAEL D. HATHAWAY, STAFF DIRECTOR
CHARLES A. TRABANDT, CHIEF COUNSEL
D. MICHAEL HARVEY, CHIEF COUNSEL FOR THE MINORITY

United States Senate
COMMITTEE ON
ENERGY AND NATURAL RESOURCES
WASHINGTON, D.C. 20510

February 19, 1982

The Honorable Doug MacCleery
Deputy Assistant Secretary for
Natural Resources and Environment
Department of Agriculture
Washington, D.C. 20250

Dear Mr. MacCleery:

On behalf of the Committee on Energy and Natural Resources, I wish to express its appreciation for your contribution to our understanding of President Reagan's proposed budget for Fiscal Year 1983.

In connection with your testimony, enclosed are questions for the record. Your response by Thursday, February 25, 1982 would be appreciated. Your response and any inquiries regarding this request should be directed to the attention of Richard D. Grundy, professional staff member at (224-2564).

Sincerely yours,

James A. McClure

James A. McClure
Chairman

JAM:nm

Questions for Deputy Assistant Secretary MacCleery
Energy Committee hearing on Department of Agriculture's
FY 1983 budget request
February 10,1982

Question from Senator McClure

1. Please provide the status of land acquisition at Sawtooth NRA. How much is remaining to be acquired? Cost of remaining lands? Acreage? Type of acquisition contemplated?

Questions for the Forest Service from Senator Melcher

2. Why are you offering 12.3 billion board feet of timber for sale when producers can't cut what you have already sold?

3. The budget in general seems to have no relationship to the RPA Program goals. Why is that?

4. As I understand the budget, it focuses on the removal of the old growth timber in already roaded areas of the West. Does the timber sale offering approach the limits of forest productivity in these areas? Does the offering go beyond the policy of non-declining even flow? Does the offering go beyond what would be a sustainable yield?

5. The Assessment tells us that the greatest opportunities for national forest productivity are on the non-industrial private lands. If that is the case, why have you all but abandoned the State and Private Forestry Program? Isn't the budget for State and Private Forestry even lower than President Carter's low bound program option for RPA?

6. With respect to research prorities, how do those in the budget differ from those proposed for the high bound program or the low bound program offered by the previous administration? What was the apparatus used for determining the new priorities? Was the RPA process used at all?

7. What range benefits will be foregone in the proposed budget? Will a normal maintenance program be possible? What is the relationship of the range budget to RPA Program goals?

Doesn't this budget violate the spirit if not the letter of the Resources Planning Act?

8. Mr. MacCleery, is it not true that $100 million of the $180 million increase proposed for the Forest Service is comprised of payments to the states under various revenue sharing programs and totally unrelated to management of the National Forests?

So the increase in Forest Service programs is really only about $80 million or less than a 4% increase over FY 1982.

9. Mr. MacCleery, in ~~on page 5 of~~ your statement you speak of the need to harvest old growth timber to increase the net annual growth in the forests.

Does the Forest Service plan to depart from the principle of non-declining even flow(sustained yield)to increase the harvesting of old growth timber?

If so, what forest values, other than timber production will benefit from such a proposal?

10. Mr. MacCleery, I cannot help but notice that your statement includes several pages of material related to mineral and timber extraction, while one paragraph is devoted to recreation (this does not include the one paragraph discussion of the Administration's plan to increase recreation and entrance fees!)

Is this indicative of the Administration's relative priorities in the Forest Service?

11. Mr. MacCleery, given the Reagan Administration's emphasis on the role of state and local governments, vis-à-vis the federal government, I am curious about the proposed reduction for the state and private forestry. The President's proposed level is now only 35% of the RPA goal.

Do you find this de-emphasis on state and private forestry to be totally consistent with the Pzesident's program?

12. Mr. MacCleery, what sorts of assumptions did the Department make in concluding that timber receipts will increase by more than 50% over FY 1982 projected levels?

Are all the stories we read in the press about lay offs in the timber industry, depressed market conditions, low wood prices, etc., unfounded?

Is not this assumption very optimistic?

13. Mr. MacCleery, with regard to fees, is the Administration going to ask Congress for authority to charge the public an admission or entrance fee for the forests?

14. Mr. MacCleery, given the need to balance funds for a variety of programs, I am curious as to why the Forest Service would recommend the money necessary to carry out a timber sale program of 12.3 billion board feet (a 1.3 billion board feet increase from 1982) given the fact that there is currently a significant backlog of sold but uncut timber.

15. Mr. MacCleery, what types of "consolidating" or "phasing out" of work units are you contemplating? What regional or area offices are you considering combining? Why does the Appropriations Committee language you reference in ~~on page 11 of~~ your statement preclude you from "objectively consider[ing] boundary changes and consolidations?

Does not the language just say that before you spend money to close regional and area offices you must get the Committee's approval?

I assume that you will keep all members of this Committee, as well as the Appropriations Committee, informed regarding any changes of this type.

Department of Agriculture

Forest Service

Answers to Questions from Budget Hearing on February 10, 1982

QUESTION SUBMITTED BY SENATOR JAMES MCCLURE

SAWTOOTH NRA

1. Question: Please provide the status of land acquisition in the Sawtooth NRA. How much is remaining to be acquired (cost, acreage, type of acquisition)?

Answer: The original area of the Sawtooth NRA is 754,999 acres. Of this, 728,420 acres were federal lands and 26,579 acres were private lands. Of the private lands 5,000 acres were desirable for acquisition in fee title while 20,000 acres were to be acquired with less than fee title (scenic easements).

About 61 percent of the acquisition program is completed. There remains about 3,560 acres to be acquired in fee title and about 6,310 acres in scenic easements.

The estimated cost to complete the acquisition is $19,000,000.

QUESTIONS SUBMITTED BY SENATOR JOHN MELCHER

TIMBER SALE OFFERING

2. Question: Why are you offering 12.3 billion board feet of timber for sale when producers can't cut what youy have already sold?

Answer: The budget provides for timber offerings of 12.3 billion board feet for the following reasons:

A review of the history of recent cycles in housing demand clearly shows that the proper time to prepare for the next upswing in housing demand is at the bottom of the market. By the time the upswing is apparent, it is usually too late to take action that will be effective in dampening the significant increase in lumber prices that always accompanies an increase in housing activity. Maintaining timber sales at a high level now will act to dampen the inflationary impact of high lumber prices when housing does pick up.

The lag time between congressional action on the budget and actual harvest of timber resulting from that congressional action is commonly three or four years. Many sales sold in fiscal year 1983 will not be harvested until 1985 or 1986. Many sales prepared in fiscal year 1983 will not be sold until 1984 or 1985 and not harvested until 1986 or beyond.

The nation is increasingly dependent upon National Forest timber for wood supplies and will remain so for a number of decades. Nineteen percent of the nation's commercial timberland base is in the National Forests (excluding areas not available by law for timber harvesting), but fully one-half of the Nation's current softwood sawtimber inventory stands on that National Forest land. Much of the National Forest timber inventory is old-growth timber which is deteriorating and should soon be harvested if it is not to be lost.

The increased dependency on National Forest timber has caused timber prices to escalate over the last 15 years at rates exceeding inflation. Past failures of the Government to provide increased levels of timber sales from National Forests led to high bid prices on volumes which were sold and has contributed significantly to purchasers present inability to operate those sales with the sharp decline in new housing construction over the last 2 years. Furthermore, the sale of timber is the principal means by which receipts for the Treasury (which are shared by and upon which National Forests counties are dependent) can be generated from the National Forests.

--The housing industry has been depressed since 1978 due to high mortgage interest rates. During the same period, a large portion of the children born during the postwar baby boom have reached the age when they would normally enter the housing market. This has created an enormous pent-up demand for housing, the largest market for timber products. In past housing booms, rapidly increasing lumber prices have contributed to inflation and hindered industry in its efforts to meet consumer demand for affordable housing. We are determined to improve the supply of raw materials and ameliorate such pressures in the future. We have also proposed several changes to timber sale contract procedures and directed the scheduling of more short term sales in order to promote more orderly marketing of National Forest timber.

--The timber industry, a major element in several States and many communities, has been hard hit by the current slump in housing. For many firms, it is critical to have at least a 3-year supply of timber under contract and the reasonable expectation of continued access to National Forest timber in order to get new credit or to negotiate extensions of current loans. An extension of most existing timber sales contracts was announced in October. While this will help prevent economic disruption within the industry for the present time, the long range solution must be more certainty and assurance about the future timber supply coming from the National Forests.

--It is important to increase the revenue produced by the National Forests both now and in the future. In fiscal year 1982, timber receipts are expected to be $1,063 million and will rise to $1,666 million in fiscal year 1983 as the recovery continues. Additional harvests are believed possible in those National Forests which have large inventories of old-growth softwood sawtimber. The amount of increase will be determined by the land management plans now being prepared. We are presently losing unacceptably large volumes to mortality and disease. After harvest of the old-growth, we can dramatically increase the net annual growth on those forests. The use of intensive management measures and genetically improved trees offers the prospect of continued high harvest levels for the indefinite future.

BUDGET AS RELATED TO RPA GOALS

3. Question: The budget in general seems to have no relationship to the RPA Program goals. Why is that?

Answer: The RPA Recommended Program is a long range renewable resource program. The need to hold down government spending and employment prevented the Forest Service from reaching this level in 1983.

TIMBER SALE POLICY

4. Question: As I understand the budget, it focuses on the removal of the old growth timber in already roaded areas of the West. Does the timber sale offering approach the limits of forest productivity in these areas? Does the offering go beyond the policy of non-declining even flow? Does the offering go beyond what would be a sustainable yield?

Answer: National Forest timber harvest limits have been determined by timber management plans for each individual Forest. These plans define the potential yield of timber that can be harvested from a Forest for a specific period of time, normally a decade. The potential yield considers the productivity of the land, conventional logging technology, standard cultural treatments, and the interrelationship with other resources and the environment.

The existing potential yield for each Forest conforms to the policy of non-declining flow. The objective of the 10-year periodic approach is to establish a potential yield no higher than can be maintained from one decade to the next. In addition, potential yield must not exceed long-term sustained yield. Annual fluctuations in the sales program within the 10-year period are acceptable and often desirable to provide operational flexibility. The Forest Service monitors the progress toward achieving the potential yield of the plan and through this monitoring assures that cumulative annual sales programs will not exceed the periodic potential yield limits set by the plan.

The timber sale offering, therefore, may approach limits of forest productivity in some specific areas, however, generally it does not. It does not go beyond the policy of non-declining even flow or beyond what would be a sustainable yield.

STATE AND PRIVATE FORESTRY 1983 PROGRAM

5. Question: The Assessment tells us that the greatest opportunities for national forest productivity are on the non-industrial private lands. If that is the case, why have you all but abandoned the State and Private Forestry Program? Isn't the budget for State and Private Forestry even lower than President Carter's low bound program option for RPA?

Answer: State and Private Forestry has not been abandoned, but the budget has been significantly reduced. One of the reasons is because recently enacted legislation provides tax relief for private landowners that should create incentives for private investment in forestry. This should reduce the need for direct federal financial support for private forest management. Also, overall budget constraints require that primary emphasis be given to managing the National Forests. Greater reliance is being placed upon the States, local governments, and the private sector to achieve necesary levels of forest resource management and protection.

The State and Private Forestry budget is 47 percent of the low bound option for RPA.

RESEARCH PRIORITIES

6. Question: With respect to research priorities, how do those in the budget differ from those proposed for the high bound program or the low bound program offered by the previous administration? What was the apparatus used for determining the new priorities? Was the RPA process used at all?

Answer: The proposed budget of $98 million is 52 percent of the fiscal year 1983 RPA target of $189.9 million. The 1980 RPA Program recognized that new or improved technology had much to contribute to increased production of goods and services from the Nation's forests and associated rangelands. It was recognized that at the 1980 funding level progress would be much delayed. Consequently, the 1980-85 RPA Program emphasized faster growth of research.

In the 1980 RPA Program of the previous administration, twenty-three broad areas of research were identifed for initiation or increased emphasis by 1985. These include: acid precipitation, hardwood and softwood utilization and management, integrated pest management, harvesting systems, rangeland productivity, mined area rehabilitation, wildlife and watershed management and anadromous fish habitat improvement. These priorities were determined in consultation with a wide cross section of public and private resource managers and users.

The proposed Forest Service budget for fiscal year 1983 reflects

Administration priorities to reduce the overall level of government spending and to increase receipts to the U.S. Treasury, primarily through expansion of user fees and increased timber sales and mineral leasing. In the proposed budget, major program adjustments, including the termination, reduction or delay of some research, will be necessary to address changing priorities. For example, acid precipitation research will be doubled in fiscal year 1983 and emphasis will shift in support of commodity programs such as timber and minerals.

Priorities in the proposed budget were determined through a detailed unit-by-unit review of programs. Criteria used to determine program terminations, reductions, and areas of increased emphasis included: Is the research nearing completion? Can the research be delayed? Is funding sufficient to maintain a viable program? What is the impact of the research on resource productivity?

The 1983 budget more reflects current priorities and the need to hold down Federal expenditures than the 1980 RPA Program.

RANGE

7. Question: What range benefits will be foregone in the proposed budget? Will a normal maintenance program be possible? What is the relationship of the range budget to RPA Program goals? Doesn't this budget violate the spirit if not the letter of the Resources Planning Act?

Answer: The noxious farm weed control program has been pared back by about 75 percent from what we accomplished in 1981 or to a 5,000 acre program in 1983. Control efforts are coordinated with local weed control districts and by necessity will be confined to only the highest priority sites for prevention of invasion or reinvasion of National Forest System lands and in turn infestation of associated private agriculture lands. Our range forage and structural improvement program will be reduced by about 50 percent from the 1982 planned program. Yearly reductions of this magnitude do not appreciably affect that year's permitted animal unit month production but will result in fewer animal unit months in the future. We will be able to maintain those allotments under improved management in 1982, but we will only be able to start improved management on a very few.

The RPA Program provided for a budget in fiscal year 1983 of $56,926,000. It also provided for a modest (7%) increase in livestock use over the next 50 years--from 9.9 million AUM's to 10.6 million AUM's. Prescribed management actions designed to maintain and to improve carrying capacities generally must be in place from 5-10 years before they will be effective in influencing livestock carrying capacities. Under continued funding at the fiscal year 1983 level, we will not be able to meet the 1980 RPA Program goal for increased livestock production nor will our ranges provide for the induced benefits envisioned in the RPA Program.

We do not believe the 1983 budget request for range management violates the spirit or letter of the Resources Planning Act. By enacting P.L. 96-514, the 1982 Interior and Related Agencies Appropriation Act, Congress adopted a revised statement of policy and expressed a general acceptance of the high bound of the range of programs and budgets recommended by the Secretary of Agriculture.

Financing range management at this level would require an additional $32 million in 1983 appropriations. The RPA Recommended Program was used as a goal when formulating the 1983 budget. Tables in our budget justification material show how the budget compares to that goal. The need to hold down government spending and employment prevents the full funding of this program level.

FOREST SERVICE PROGRAMS

8. Senator McClure. Mr. MacCleery, is it not true that $100 million of the $180 million increase proposed for the Forest Service is comprised of payments to states under various revenue sharing programs and totally unrelated to management of the National Forests?

So, the increase in Forest Service programs is really only about $80 million or less than a 4% increase over FY 1982.

Mr. MacCleery. Yes, about $100 million of the $181 million increase over 1982 is for increased payments to states.

While not directly related to the management of the National Forests most of these payments are for the benefit of public schools and public roads in counties where the National Forests are located. In this way they could be looked upon as indirectly benefiting the National Forests.

BEST COPY AVAILABLE

TIMBER HARVEST POLICY

9. Senator McClure. Mr. MacCleery, on page 5 of your statement you speak of the need to harvest old growth timber to increase the net annual growth in the forests.

Does the Forest Service plan to depart from the principle of non-declining even flow (sustained yield) to increase the harvesting of old growth timber?

If so, what forest values, other than timber production will benefit from such a proposal?

Mr. MacCleery. The Forest Service is planning to carefully evaluate alternatives that depart from the principle of non-declining even flow in the current land management planning efforts that are required by the National Forest Management Act of 1976. These alternatives will be developed at the National Forest level where their social, economic and environmental consequences will be evaluated and displayed and where full public participation will take place. Specifically, alternatives will be considered where high mortality losses can be significantly reduced or prevented or age class distribution can be improved, not only for timber but for other resource purposes as well. Alternatives will be further considered where adhering to non-declining even flow would cause a substantial adverse impact upon a community. Lower mortality rates and better distribution of age classes could benefit all Forest resources, community stability, and other benefits, beyond just the benefits of timber production. Selection of the alternative for managment of a National Forest will consider all Forest values and will be made on the basis of maximizing net public benefits.

RECREATION

10. Senator McClure. Mr. MacCleery, I cannot help but notice that your statement includes several pages of material related to mineral and timber extraction, while one paragraph is devoted to recreation (this does not include the one paragraph discussion of the Administration's plan to increase recreation and entrance fees!)

Is this indicative of the Administration's relative priorities in the Forest Service?

Mr. MacCleery. One of the priorities of the Administration is to emphasize programs that enhance economic strength and generate receipts. The timber and minerals programs definitely fall into this category. We did not intend to give the impression that recreation is being slighted in 1983. In fact, it is one of the programs being emphasized in 1983--an increase of 11 percent over 1982.

STATE AND PRIVATE FORESTRY

11. Senator McClure. Mr. MacCleery, given the Reagan Administration's emphasis on the role of state and local governments, vis-a-vis the federal government, I am curious about the proposed reduction for state and private forestry. The President's proposed level is now only 35% of the RPA goal.

Do you find this de-emphasis on state and private forestry to be totally consistent with the President's program?

Mr. MacCleery. Yes. The President's program shifts some private forestry responsibilities from the Federal Government to States and the private sector.

One of the primary roles of the Federal Government in support of private forest management should be to assure that tax and financial institutions are in place (and that the financial climate is right) to encourage investment in economically viable forest management opportunities. Recent changes in the tax law should provide this financial climate by providing major economic incentives to improving managment of small private woodlands:

1) Investment Tax Credit for Reforestation

Under P.L. 96-451 landowners can claim a 10 percent tax credit (up to $10,000 per year), plus 7 year amortization of capitalized reforestation investments. It is estimated that landowners (even those with modest incomes) can capture 30-40 percent of the initial up-front investment costs in site preparation and regeneration over a 7 year period through this mechanism.

2) Inheritance Taxes

Inheritance taxes historically have provided a strong disincentive to investment in timber, because enhanced timber values were subject to being taken by the tax man. Inheritance taxes have frequently forced premature liquidation of valuable growing stock prior to financial maturity. Last year, Administration-supported legislation was passed which reduced many of the problems created by Federal estate and gift taxes, including: 1) The exemption from estate taxation was increased to $600,000, with an unlimited marital deduction; 2) the maximum estate tax rate will be reduced from 70 to 50 percent over a 4 year period; and 3) the annual gift tax exclusion was increased from $3,000 to $10,000 per year.

3) Capital Gains

Capital gains treatment of timber provides a strong incentive to investment which has been strengthened by recent changes in the tax code. In 1979, the amount of capital gains income subject to taxation as ordinary income was dropped from 50 percent to 40 percent. Last year, under President Reagan's tax bill, the maximum tax rate for individuals was lowered to 50 percent, resulting in a maximum capital gains tax rate of 20 percent.

4) Timber Insurance

The Federal Government is testing a program focused on reducing investment risk by making crop insurance available on timber. Pilot tests are planned to be in operation by January 1983 in selected counties of North Carolina, South Carolina, Georgia, Alabama and Florida. It is hoped that private insurers will be encouraged to enter the market as the Federal program gathers necessary actuarial data.

The Federal tax and financial structure is now largely in place to provide a favorable financial climate to encourage more capital to flow into small private forestry investments. State and Private Forestry programs will focus not on supplying direct financial assistance but on assuring that landowners are aware of the management opportunities that exist. This will require a cooperative effort of the Federal Government, State foresters, and private industry.

We do not propose a change in the traditional Federal role in supplying technical information to landowners and State forestry agencies through Forest Service State and Private programs, the Cooperative Extension Service, and Soil Conservation Service. However, it is clear that, due to Federal agency funding constraints, the heaviest burden for getting the work out must, of necessity, fall on State Foresters and the private sector . . . both industry and private consultants. It is at the grass roots level that the contacts must be made and, the job of explaining to landowners why it is advantageous for them to invest in timber management must be accomplished. Industry has a key role in this process. It has the expertise and often the equipment and manpower which they could make available at cost.

TIMBER RECEIPTS

12. Senator McClure. Mr. MacCleery, what sorts of assumptions did the Department make in concluding that timber receipts will increase by more than 50% over FY 1982 projected levels?

Are all the stories we read in the press about lay offs in the timber industry, depressed market conditions, low wood prices, etc., unfounded?

Is not this assumtion very optimistic?

Mr. MacCleery. We have made projections of the anticipated timber receipts based upon the selling price values over the past 4 years for the timber under contract. Since the average timber sale contract is about 4 years in length, it is reasonable to assume that the harvest value for the fourth year could be used to determine the anticipated receipts for the projected year. Since the selling prices have risen dramatically since 1977, the harvest values have shown a similar rise. The 1978 average selling price of $125 per thousand was used to estimate the 1982 timber receipts. The 1979 average selling price of $173 per thousand was discounted to $158 per thousand for the 1983 estimate of timber receipts, to reflect the recent 2-year extension of timber sale contracts and to account for the removal of lower value stumpage because of lower selling values for lumber in the early part of the market recovery process in 1983.

The current market situation in the timber industry is depressed severely. However, we are optimistic that there will be an upswing in the economy and the housing industry within the next year and feel that projections we have made in the volume to be harvested and the harvest values are realistically in line with the economic recovery.

ADMISSION AND ENTRANCE FEES

13. Senator McClure. Mr. MacCleery, with regard to fees, is the Administration going to ask Congress for authority to charge the public an admission or entrance fee for the forests?

Mr. MacCleery. The Administration is considering a proposal which would allow Federal agencies broad discretion to charge reasonable admission and user fees to defray portions of the costs of providing such areas and facilities. The details of this proposal have not yet been completed.

TIMBER SALE OFFERING

14. Senator McClure. Mr. MacCleery, given the need to balance funds for a variety of programs, I am curious as to why the Forest Service would recommend the money necessary to carry out a timber sale program of 12.3 billion board feet (a 1.3 billion board feet increase from 1982) given the fact that there is currently a significant backlog of sold but uncut timber.

Mr. MacCleery. Although the harvest has been down due to the depressed housing market contributing to the backlog of uncut timber under contract, we expect a significant recovery by 1983. To meet this demand and provide consumers affordable housing, it is important to offer 12.3 billion board feet in 1983. The volume presently under contract is approximately equal to a 3-year harvest. Many firms have substantially less than 3-years under contract. Often it is critical to have at least a 3-year supply of timber under contract and the reasonable expectation of continued access to National Forest timber in order to get new credit or to negotiate extensions of current loans.

BOUNDARY CHANGES AND CONSOLIDATIONS

15. Senator McClure: Mr. MacCleery, what types of "consolidating" or "phasing out" of work units are you contemplating? What regional or area offices are you considering combining? Why does the Appropriations Committee language you reference on page 11 of your statement preclude you from objectively considering boundary changes and consolidations?

Does not the language just say that before you spend money to close regional and area offices you must get the Committee's approval?

I assume that you will keep all members of this Committee, as well as the Appropriations Committee, informed regarding any changes of this type.

Mr. MacCleery: The only consolidation study being contemplated is the possible merging of our Southeastern Area Office for State and Private Forestry and our Southern Regional Office for the National Forest System.

As a result of the need to reduce the general level of federal spending and employment, and the expected impact of inflation in 1982 and 1983, we plan to abolish an estimated 420 positions, terminate 30 to 35 research work units and close about eight research laboratories. Some of the work in terminated units and locations will be consolidated with research in other units.

We are aware that the Appropriations Committee language does not preclude such studies and we will inform your Committee as well as the Appropriations Committee before any money is spent to close Regional and Area Offices.

APPENDIX III

RESPONSES FROM MR. NOBLE TO ADDITIONAL COMMITTEE QUESTIONS

JAMES A. MC CLURE, IDAHO, CHAIRMAN

MARK O. HATFIELD, OREG.
LOWELL P. WEICKER, JR., CONN.
PETE V. DOMENICI, N. MEX.
MALCOLM WALLOP, WYO.
JOHN W. WARNER, VA.
GORDON J. HUMPHREY, N.H.
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JOHN P. EAST, N.C.
JOHN HEINZ, PA.

HENRY M. JACKSON, WASH.
J. BENNETT JOHNSTON, LA.
DALE BUMPERS, ARK.
WENDELL H. FORD, KY.
HOWARD M. METZENBAUM, OHIO
SPARK M. MATSUNAGA, HAWAII
JOHN MELCHER, MONT.
PAUL E. TSONGAS, MASS.
BILL BRADLEY, N.J.

MICHAEL D. HATHAWAY, STAFF DIRECTOR
CHARLES A. TRABANDT, CHIEF COUNSEL
D. MICHAEL HARVEY, CHIEF COUNSEL FOR THE MINORITY

United States Senate
COMMITTEE ON
ENERGY AND NATURAL RESOURCES
WASHINGTON, D.C. 20510

February 19, 1982

The Honorable Edward E. Noble
Chairman of the Board
United States Synthetic Fuels Corporation
1900 L Street, N.W.
Washington, D.C. 20586

Dear Mr. Noble:

On behalf of the Committee on Energy and Natural Resources, I wish to express its appreciation for your contribution to our understanding of President Reagan's proposed budget for Fiscal Year 1983.

In connection with your testimony, enclosed are questions for the record. Your response by Thursday, February 25, 1982 would be appreciated. Your response and any inquiries regarding this request should be directed to the attention of Richard D. Grundy, professional staff member at (224-2564).

Sincerely yours,

James A. McClure

James A. McClure
Chairman

JAM:nm

Questions for Chairman Edward E. Noble
Energy Committee hearing on United States
Synthetic Fuels Corporation's FY '83 budget
request
February 10, 1982

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1. What is the awards strategy being pursued by the Board of Directors, including when, and on what basis, financial awards will be made?
    a. What is the current schedule for solicitations and awards?
    b. What are the "project maturity" criteria and how are such criteria being specifically applied?
    c. What are the "project strength" criteria and how are such criteria being applied?
    d. On what specific basis, and when, does the Board intend to define "qualified concerns" for the purpose of awarding financial assistance?

2. What is the approach being adopted by the Board of Directors to the achievement of the statutory goal of diversity as well as production?
    a. Specifically, what is the Board's intended procedure for satisfying this statutory requirement?
    b. What is the relationship between the current two solicitations and the Board's strategy for satisfying this statutory requirement?

3. How successful has the Corporation been in avoiding unauthorized activities, for example, Energy Mobilization Board type activities? There is a statutory requirement that the EPA, Department of Energy, and other Federal agencies, deal with the Corporation as if it were a private corporation. In order to provide a mechanism so that the Corporation could utilize the expertise of Federal agencies the Energy Security Act established an Advisory Committee to the Board of Directors (Sec. 123).
    a. Reportedly there is an agreement between the corporation and the Environmental Protection Agency providing for the detail of EPA employees to the Corporation. Does detail of EPA employees to the corporation call into question whether EPA as a regulatory agency will be provided acess to what otherwise would be considered proprietary information?

b. Also, to what extent could the detail of EPA employees to the Corporation suggest a conflict that could either prejudice EPA regulatory decisions, or serve as a basis for a legal challenge of EPA regulatory decisions?

c. What other formal interagency agreements exist? Please furnish copies.

d. Are there any other detailees current at the SFC? Who, from where, and for what specific purpose?

e. Has consideration been given to the utilization of the Advisory Committee as the vehicle to accomplish these purposes?

4. There are reports that consideration is being given to establishment of an advisory committee to the Board of Directors, with a directive to examine the need for the Corporation and the appropriateness of its statutory goals.

   a. What are the details in the regard? Would you furnish the purpose of such a committee, the names of actual or purposed individuals, and copies of any correspondence?

   b. What effect would such a committee at this time have on the capability of the Board of Directors to proceed expeditiously to fulfill its statutory mandate?

   c. What is the statutory authority for such a committee?

5. Is the Corporation contemplating a contract negotiation strategy that will ensure sufficient commitment by the sponsors of synthetic fuels projects to assure completion of the projects selected by the Board to receive financial assistance.

   a. In this regard, what are the merits of combinations of financial assistance?

   b. How do you propose to apply the "credit elsewhere" criteria in the Energy Security Act?

QUESTIONS FROM SENATOR FORD

7. In other governmental loan guarantee programs, a percentage of approved projects which default has been assumed at the outset of the program and then adjusted on the basis of experience.

a. What is the assumption of the Corporation with regard to the default rate for projects receiving loan guarantees?

b. What is the detailed analysis supporting this assumption?

c. What guidance, if any, has been recommended by the Administration with regard to this assumption?

d. Has the Corporation given cognizance to this guidance?

e. How does that relate to the Corporation's independent status?

f. How does this default rate assumption compare to extensive testimony by past Administrations that the default rate for synfuels projects would be from 1 in 4 to as low as 1 in 7?

8. Since most synfuels projects are seeking loan guarantees, the use of a low default rate would allow the Corporation to underwrite many more projects with the $8.5 billion currently available.

a. What is the maximum number of projects that the Corporation believes it can support with these funds?

9. Under Sec. 131(b)(2) of P.L. 96-294, the Corporation is to give preference to proposals which represent the least commitment of financial assistance and the lowest unit production cost.

a. Which form of financial assistance among price guarantees, purchase agreements, or loose guarantees does the Corporation believe most closely meets the least financial commitment criterion?

b. What is the analysis which supports this conclusion?

c. Does this mean that projects seeking only one form of financial assistance as opposed to a combination, such as a loan guarantee and price supports, are preferable with regard to the least financial assistance criterion?

9. For the mature projects in the final review process, there are large variations in the financial assistance requested in relationship to the daily production capacity.

a. What is the stated capital investment per barrel of oil equivalent daily capacity of each of the final eleven projects?

b. What percentage of the unit production is represented by this parameter?

c. What is the Corporation's current estimate of the amount of synthetic fuels production (in BOE/D) that it intends to achieve by 1992 through its financial assistance to projects?

d. What is the maximum estimated production achievable with the financial resources currently available to the Corporation?

Questions from Senator Bradley

QUESTIONS FOR ED NOBLE ON
SYNTHETIC FUELS CORPORATION FY83 BUDGET

10. Do you think that the very possibility that cheap or free government money might be available for a synfuel project might actually inhibit a private company from putting up its own money for a synfuel plant?

11. I would expect that chemical companies would be most likely to have the expertise necessary to construct a synfuel plant; after all, changing coal or shale into liquid fuels is a chemical reaction, right? Why aren't the chemical companies more involved than they are? (The big chemical and oil companies are not well represented in the 11 candidate projects.)

12. I thought you people were going to run the SFC like a business. You are supposed to be in the business of providing loans and other guarantees to synfuels plants; but you are acting like the normal government agency instead of bankers. Your own government engineers are telling the private firms how to do a synfuel plant. Do bankers normally get into the chemical and engineering details of the conversion process? Why don't you set specifications for several types of synfuels plants and ask for bids? Then you could accept the lowest bid, fire all your engineers, and save the taxpayer's money.

13. It's going to cost between $50 and $80 per barrel of oil-equivalent to change shale or coal to oil, right? I hope you aren't goint to produce much; you're just going to fund small prototype demonstrations, right? I hope you aren't going to fund great big, money-losing white elephants.

14. Why are you providing loan guarantees to money-losing projects? Won't you be forced to send good money after bad — like Chrysler or Poland? Why not offer price guarantees only?

15. If we imposed a $5 or $10 per barrel oil import fee, would we really need a Synthetic Fuels Corporation? Why?

United States Synthetic Fuels Corporation
1900 L Street, N.W. Washington, District of Columbia 20586 Telephone: (202) 653-4400

March 12, 1982

The Honorable James A. McClure
Chairman
Senate Committee on Energy
  and Natural Resources
Washington, D.C. 20510

Dear Mr. Chairman:

Thank you for the opportunity to testify before the Committee on Energy and Natural Resources with regard to the budget and program of the Synthetic Fuels Corporation for fiscal year 1983.

In connection with my testimony, I am enclosing my responses to the questions submitted for the record together with items I promised the Committee. The first two items are covered in these responses; the last three are attached.

I look forward to working with you and the Committee as we continue our efforts to develop a viable synthetic fuels industry.

Sincerely,

Ed

Edward E. Noble
Chairman of the Board

Enclosure

Responses to Senate Energy Committee Questions

Question 1: What is the award strategy being pursued by the Board of Directors, including when, and on what basis, financial awards will be made?

Answer 1: The Board is planning to select, during March, those projects submitted in response to the initial solicitation that will go into Phase II; eleven projects are now being considered for such selection. Several months of detailed evaluation and negotiation will probably be necessary before awards can be considered by the Board. A second general solicitation, closing May 31, 1982, and subsequent solicitations are expected to bring to the Corporation additional mature projects that can be considered for award by the Board.

Awards will be made to projects on the basis of the requirements of the ESA. The projects receiving awards will be those that have the greatest probability of being economically and technically successful, thereby demonstrating the practicality of commercial production of synthetic fuels in the United States. Programmatic objectives that will also influence awards are being developed by the Board and staff; this process is discussed in the answer to Question 2.

Question 1a: What is the current schedule for solicitations and awards?

Answer 1a: The best way to explain our schedule for solicitations and awards is to enclose a chart entitled Solicitation Procedures. (See Exhibit A.) This chart depicts general solicitation closings (receipt of proposals) every six months with awards contemplated 8 to 10 months thereafter and some of the key milestones in between.

Question 1b What are the "project maturity" criteria and how are such criteria being specifically applied?

1c: What are the "project strength" criteria and how are such criteria being applied?

Answer 1b & 1c: The Corporation's project maturity and strength criteria are the basis on which the Board will decide to move certain projects into negotiations for financial assistance. Those criteria are:

Maturity

1. Rights to the plant site have been secured with no material encumbrances during the term of the proposed financial assistance;

2. Comprehensive financial viability and technical feasibility studies of the project have been completed;

3. The design work is sufficiently advanced that costs can be estimated with a high degree of accuracy during Phase II;

4. Access to necessary resource (feedstock), utility and water inputs have been obtained;

Answer 1b & 1c: (Cont'd)

5. Rights to key technology have been secured;

6. The estimated amounts and terms of commitments of each sponsor to the project have been outlined;

7. Permits are either in hand or can realistically be obtained on a schedule that would permit the project to begin construction upon the receipt of assistance from the Corporation.

Strength

1. Technological soundness, including scale-up risks;
2. Potential for replication;
3. Management capability;
4. Economic viability;
5. Product marketability; and
6. Regulatory compliance.

For your information, the Board first determined that 11 of the more than 60 proposed projects were mature and subsequently will decide which of the 11 are strong, i.e., will enter negotiations. Some of the projects may be conditionally admitted to negotiations subject to their meeting completely the requirements of strength criteria.

Question 1d: On what specific basis, and when, does the Board intend to define "qualified concerns" for the purpose of awarding financial assistance?

Answer 1d: The issue of whether a response is a "qualified concern" has two parts. The first is an examination of whether the sponsor is a concern. This is an eligibility test and has been applied to all proposals starting early in the review process. A "concern" is defined in the Act to include partnerships, corporations, political subdivisions etc. Whether a concern is "qualified" depends on whether it demonstrates to the satisfaction of the Board "evidence of its capability directly or by contract to undertake and complete the design, construction and operation of a proposed synthetic fuels project". This test is reflected in the "management capability" and "sponsor capability" sections of the Corporation's criteria.

Question 2: What is the approach being adopted by the Board of Directors to the achievement of the statutory goal of diversity as well as production?

Answer 2:

At its meeting on February 16, 1982, the Board adopted a resolution stating the Board's approval of "diversity that will improve the industry's capability for expansion and long-term production," and directing the staff "to continue developing and analyzing programmatic options for defining and implementing such diversity." At Exhibit B is the briefing paper presented to the Board at the February 16, 1982, meeting, describing the Task Force approach in more detail. (The text of approved resolution is found on page 7 of the paper.)

A senior staff Task Force, chaired by Mr. Victor Schroeder is developing these options. The Corporation is not pursuing diversity for its own sake. Rather, in accord with the Energy Security Act, the Corporation will be defining "diversity" operationally in terms of those synthetic fuel options which can make significant contributions to the objective of developing a national capability to expand synthetic fuels production rapidly and to a large scale as economic or other factors provide. This strategic approach to diversity for longer-term production potential is intended to provide clear guidelines concerning how much and which kinds of diversity are appropriate.

Question 2a: Specifically, what is the Board's intended procedure for satisfying this statutory requirement?

Answer 2a: At its February meeting, the Board adopted a resolution which stated that the Board would be "prepared to tradeoff some near-term production for the diversity that will improve the industry's capability for expansion and long-term production." It is not yet clear whether, when, and how any tradeoffs will arise and to some extent, tradeoffs will depend on the universe of mature and developing projects. The Board has not yet determined the specific procedures or information it will use to exercise programmatic judgments regarding diversity. However, the staff Task Force on programmatic issues has been and will continue to provide the Board with regular briefings on strategic matters. The staff will be developing frameworks and alternative approaches for emphasizing a diversity objective.

Question 2b: What is the relationship between the current two solicitations and the Board's strategy for satisfying this statutory requirement?

Answer 2b: The Corporation's Initial and Second Solicitations have been structured around resource categories. Differing synthetic fuel resource bases are a fundamental element of diversity. Especially for the early solicitations, the Corporation expects that the strongest projects which have successfully met the maturity and strength criteria, are likely to be different from previously assisted or other ongoing projects in ways that are significant in terms of the Corporation's programmatic objective of building an appropriately diverse experience base that can support aggressive growth of a synthetic fuels industry. It may become necessary later to target our solicitations toward important areas of diversity which have gone unfulfilled through the current two solicitations.

Question 3: How successful has the Corporation been in avoiding unauthorized activities, for example, Energy Mobilization Board type activities? There is a statutory requirement that the EPA, Department of Energy, and other Federal agencies, deal with the Corporation as if it were a private corporation. In order to provide a mechanism so that the Corporation could utilize the expertise of Federal agencies the Energy Security Act established an Advisory Committee to the Board of Directors (Sec. 123).

Answer 3: With regard to the first part of the question, the Corporation has been diligent in avoiding activities not authorized by the Energy Security Act. For example, in the environmental area, the Corporation has responded to G.A.O. suggestions concerning monitoring guidelines by strictly adhering to the provisions of the Act. (See Exhibit C) Similar adherence to the terms of the Act has formed the Corporation's responses to environmental questions posed by Representative Moffett. (See Exhibit D) In the area of environmental permitting, the Corporation has limited its role to determining whether a proposer:

- has identified required federal, state and local permits, understands permit regulations and application procedures and has consulted with appropriate agencies regarding completeness of permit applications;
- provides evidence showing all regulatory guidelines and permitting requirements can be met in a realistic time frame, allowing sufficient time for federal, state and local review and processing of applications;

Answer 3:
(Cont'd)

- proposes to consult with the Administrator of the Environmental Protection Agency, the Secretary of Energy, state and local government entitites and, where appropriate, other organizations concerned with these matters, in a manner which facilitates timely completion of the project.

Under the Energy Security Act the Corporation must give priority to processing projects for which relevant states are expediting permitting but the Corporation does not have power to, and will not, itself expedite any permits.

With regard to the second part of your question, the Act requires members of the Advisory Committee, in communications with the Corporation, to be governed by their own conflicts of interest laws and regulations as they relate to meetings with representatives of a private corporation. This provision on its face extends to communications by Advisory Committee members themselves rather than to staff contacts under consulting arrangements. This is consistent with the existence of a separate Sec. 172(a) dealing with advice from Federal agencies which does not contain such language. Section 120(a)(4)(B) of the Act is also relevant. It refers explicitly to "reimbursement of governmental agencies for the salaries of personnel of such agencies detailed to the Corporation."

Question 3a: Reportedly there is an agreement between the Corporation and the Environmental Protection Agency providing for the detail of EPA employees to the Corporation. Does detail of EPA employees to the Corporation call into question whether EPA as a regulatory agency, will be provided access to what otherwise would be considered proprietary information?

Answer 3a: A copy of the agreement with EPA is enclosed (See Exhibit E). To date, persons who have been asked to furnish consulting services to the Corporation have not worked in program areas and therefore questions of conflicts and confidentiality of information have not arisen. To the extent that consulting services are furnished in the program area by employees of other federal entities, it is the Corporation's intention to address the problems of confidentiality through appropriate agreements calling for non-use and preservation of confidentiality of information. Conflicts questions would also be addressed for such consultants.

In any case, the Corporation only intends to use such consultants in instances in which it has a temporary need or has not yet completed its staffing. It does not intend to use such consultants as permanent substitutes for regular staff.

Question 3b: Also, to what extent could the detail of EPA employees to the Corporation suggest a conflict that could either prejudice EPA regulatory decision, or serve as a basis for a legal challenge of EPA regulatory decisions?

Answer 3b: The basis for legal challenges to EPA regulatory decisions are matters on which the Corporation is not the primary authority. To answer this question would require a knowledge of the Administrative Procedures Act (which does not apply to the Corporation) and EPA regulations (as to which EPA is the best authority). However, if EPA employees detailed to the Corporation are prohibited by the Corporation from disclosing or using the information they obtain, and are not after their return to EPA directly involved in EPA adjudications, rulemakings or permit decisions on the matters on which they work for the Corporation, it would be difficult to see how such activities would lay a basis for a challenge. The proper selection of EPA activities for such employees to work on after they return to the EPA would be within the control of the EPA.

Question 3c: What other formal interagency agreements exist? Please furnish copies.

Answer 3c: The other agreements that exist with other agencies are attached hereto (See Exhibit F through J), with the exception of a Memorandum of Understanding between the Corporation and the Treasury Department which pertains to the flow of funds between the Corporation and the Treasury and does not pertain to the furnishing of consulting services or advice. These other interagency agreements are with the Department of Energy, NASA and the United States Railway Association. When the Corporation was declared operational by the President, we, as the successor to the Department of Energy for monitoring compliance by Union and Tosco, became subject to a Memorandum of Understanding between the Department of Energy and the Department of Defense.

Question 3d: Are there other detailees current at the SFC? Who, from where, and for what specific purpose?

Answer 3d: There are currently two persons detailed to the synthetic fuels Corporation for part or all of the month of March: Mr. Steven M. Gottlieb, an attorney who works on environmental matters for the Department of Energy, has been detailed for 30 days to work specifically on environmental permit and environmental monitoring issues in connection with the pending 11 proposals; and Mr. William L. Noll, an engineer who works for the Department of Energy, has been detailed for 25 days to conduct cost and engineering analysis of the TOSCO and Union projects.

Question 3e: Has consideration been given to the utilization of the Advisory Committee as the vehicle to accomplish these purposes?

Answer 3e: The Advisory Committee consists of cabinet level members of the government. As such it is a less flexible instrument for obtaining advice from Federal departments and agencies than Sec. 172(a) of the Energy Security Act, including informal staff-to-staff contacts. To the extent that any issues arise on which formal input from cabinet level offices is required, consideration would certainly be given to using the Advisory Committee.

Question 4a: There are reports that consideration is being given to establishment of an advisory committee to the Board of Directors, with a directive to examine the need for the Corporation and the appropriateness of its statutory goals.

What are the details in this regard? Would you furnish the purpose of such a committee, the names of actual or proposed individuals, and copies of any correspondence?

Answer 4a: The Corporation has a formal Advisory Committee to the Board which is established by the Energy Security Act. The group referred to in the question is an ad hoc Synthetic Fuels Study Panel. It is a temporary endeavor which is substantially less formal, and less important group than the Corporation's Advisory Committee. The Study Panel has a mandate substantially different than that suggested by the question. The panel, which consists of approximately ten experts, was invited to sit on a one-time basis to study questions of importance to our planning efforts. The Study Panel was scheduled to meet for four days starting January 22, but the severe Washington weather of the time led to a last minute postponement. We are working to reschedule the Study Panel as soon as a period can be found that will work on all of the calendars involved. It now looks as though the Panel may not be able to meet before May.

The Panel is intended to provide the Corporation, through its Planning Staff, with a range of perspectives on generic and programmatic questions. It is to provide perspectives for the Corporation's efforts to implement the Energy Security Act; it

Answer 4a: (Cont'd) is not re-examining the appropriateness of the statute or the Corporation's existence. The panel may comment on issues related to the Corporation's role and objectives in implementing the Act, such as possible program implementation tradeoffs between near-term production levels and diversity for longer-term production. In general, the Study Panel is to function as one of many sources of information and expert opinion considered by the Planning Staff in the preparation of the Corporation's programmatic approach and Comprehensive Strategy. Names of actual and proposed individuals are presented at Exhibit K. Copies of significant correspondence are included in Exhibit L.

Question 4b: What effect would such a committee at this time have on the capability of the Board of Directors to proceed expeditiously to fulfill its statutory mandate?

Answer 4b: The Study Panel will not deal with project-specific issues or information, nor retard in any way the project selection and negotiation process.

Question 4c: What is the statutory authority for such a committee?

Answer 4c: The authority for obtaining such expert perspectives is based on the general powers of the Corporation as enumerated in Section 171 of the Energy Security Act, especially Section 171(a)(11) regarding the service of experts.

Question 5: Is the Corporation contemplating a contract negotiation strategy that will ensure sufficient commitment by the sponsors of synthetic fuels projects to assure completion of projects selected by the Board to receive financial assistance?

Answer 5: We will negotiate so as to require sponsors to have substantial equity committed to the project, including completion guarantees and commitments to handle cost overruns. We will also seek to structure agreements in a way where sponsors find it costly to abandon their projects.

Question 5a: In this regard, what are the merits of combinations of financial assistance?

Answer 5a: Given the Corporation's emphasis on high equity contributions by sponsors, the Corporation will turn to combinations of financial assistance and where desirable to minimize the Corporation's financial exposure and to assist certain projects where necessary.

A combination of financial assistance forms may also be desirable to both the project sponsor and the Corporation. For example, one company or a combination of companies may be able to raise 40% of the required equity of a $1B venture, but no more. Hence, a Corporation loan guarantee might be necessary to raise the balance of the funds through debt issues. After successful start-up it can be argued that a loan guarantee is no longer necessary because the completion risk has passed but market risks are still such that a price guarantee is appropriate. At that point, it may be possible to decrease the Corporation's obligation because of the nature of a price guarantee incentive but allow a portion of the original obligation to be used for price guarantee support.

In this example, a sequencing of financial assistance mechanisms decreases the Corporation's assistance over time but appropriately assists a worthy project as it develops into a commercial operation.

Question 5b: How do you propose to apply the "credit elsewhere" criteria in the Energy Security Act?

Answer 5b: The "credit elsewhere" test will be applied as follows:

1. Each project's economic and financial characteristics, including debt and equity requirements, will be evaluted on an unassisted basis by the Corporation.

2. The actual sponsors of the project will be analyzed to determine their ability and willingness, in light of the risks and potential awards involved, to fund their respective shares or estimated project capital costs, including possible construction costs overruns and operating losses, on an unassisted basis.

3. In the event that the project appears attractive but the sponsors appear unable to fund their respective shares during construction and start-up, both the likelihood of expanding the project's sponsorship and extent to which additional sponsors have been sought will be considered.

4. The ability of the project to attract sufficient debt financing from prudent lenders, on reasonable terms and conditions, also will be considered on an unassisted basis; such financing may include various forms of co-financing by third parties or completion guarantees by the sponsor in order to minimize the level of assistance required of the Corporation.

5. If Corporation assistance is required in order for sufficient debt and equity capital to be attracted on reasonable terms and conditions, the project will be analyzed further to determine the most appropriate form and minimum amount of financial assistance required to see the project through completion and start-up.

There is no question 6 received from the Senate Energy Committee.

Question 7: In other governmental loan guarantee programs, a percentage of approved projects which default has been assumed at the outset of the program and then adjusted on the basis of experience.

a: What is the assumption of the Corporation with regard to the default rate for projects receiving loan guarantees?

b: What is the detailed analysis supporting this assumption?

c: What guidance, if any, has been recommended by the Administration with regard to this assumption?

d: Has the Corporation given cognizance to this guidance?

e: How does that relate to the Corporation's independent status?

f: How does this default rate assumption compare to extensive testimony by past Administrations that the default rate for synfuels projects would be from 1 in 4 to as low as 1 in 7?

Answer 7: The various parts of this question all relate to the assumed reserve ratio for loan guarantee agreements. Unlike loan guarantee authorities for the Department of Energy and many Federal programs, the framers of the Energy Security Act wanted to assure that each dollar of Corporation commitment was backed by monies already appropriated to the Energy Security Reserve. Accordingly, Section 152(b)(1) of the Energy Security Act requires that dollars obligated to a loan guarantee draw down the Corporation obligational authority on a one-to-one basis. Thus, it has not been necessary for the Corporation to undertake the analyses to support an assumed default rate for assessing appropriate reserve ratios. In general, the Corporation is working to evaluate projects and structure any loan guarantee incentive contracts so that the likelihood of any defaults is small, and Corporation outlays in any default situation are minimal.

Since it has not been necessary for the Corporation to make reserve ratio assumptions for its own program, the Corporation has not accepted any guidance from the Administration on assumed default rates.

Question 8: Since most synfuels projects are seeking loan guarantees, the use of a low default rate would allow the Corporation to underwrite many more projects with the $8.5 billion currently available.

Question 8a: What is the maximum number of projects that the Corporation believes it can support with these funds?

Answer 8a:

Section 152(b)(1) provides that all Corporation contingent liabilities -- including price guarantees, loan guarantees, and other incentives -- draw on a one-to-one basis against Corporation obligational authorities.

The use of a default rate does not necessarily bear on the number of projects assisted We cannot estimate the maximum number of projects aided since that is a function of the number and size of the projects before us and our negotiation ability.

Question 9: Under Sec. 131(b)(2) of P.L. 96-294, the Corporation is to give preference to proposals which represent the least commitment of financial assistance and the lowest unit production cost.

Question 9a: Which form of financial assistance among price guarantees, purchase agreements, or loan guarantees does the Corporation believe most closely meets the least financial commitment criterion?

Question 9b: What is the analysis which supports this conclusion?

Question 9c: Does this mean that projects seeking only one form of financial assistance as opposed to a combination, such as a loan guarantee and price supports, are preferable with regard to the least financial assistance criterion?

Answer 9a, 9b, 9c: Any one or combination of the price guarantee, purchase agreement or loan guarantee forms of financial assistance may, for a specific project, involve the least financial commitment. A price guarantee and a purchase agreement impose no construction or operation risk on the Corporation, but may be paid out as indicated by a price formula depending on market risks. There may also be recoupment of funds by the Corporation. A loan guarantee requires the Corporation to assume risks during construction and relatively less risk after construction is completed. The loan guarantee need not be paid unless there is a default.

Question 9: (Ford) For the mature projects in the final review process, there are large variations in the financial assistance requested in relationship to the daily production capacity.

Question 9a: What is the stated capital investment per barrel of oil equivalent daily capacity of each of the final eleven projects?

Answer 9a: The variations in financial assistance requested by the 11 remaining projects and the capital investment per barrel will result from several key factors:

1. The different technologies proposed given the resource base contemplated as a feedstock;
2. Site specific considerations such as transportation of final product, proximity to the resource base and regulatory constraints;
3. The specific financial and technical design objectives assumed in each location to achieve economies of scale, e.g., some sponsors have decided to build 100% of their facility at once while others have decided that phased development is more prudent given the risk profile of the project.

Given these important differences in project structure, it would be misleading to list the proposed capital investment in barrels of oil equivalent per day.

Moreover, since the Corporation intends to negotiate competitively through Phase II, the release of such data would surely hinder our ability to negotiate the least commitment of financial assistance required by each project.

Question 9b: (Ford) What percentage of the unit production is represented by this parameter?

Answer 9b: Because of the extreme differences between projects, as noted above, the answer to this question is even more difficult to arrive at now. During Phase II of our review process, the Corporation will be conducting independent cost assessments to better understand unit production as a function of capital investment.

Question 9c & 9d: (Ford) What is the Corporation's current estimate of the amount of synthetic fuels production (in BCE/D) that it intends to achieve by 1992 through its financial assistance to projects? What is the maximum estimated production achievable with the financial resources currently available to the Corporation?

Answer 9c & 9d: We have no estimate at this time. We assume that the three already-assisted projects (ANR, Union and TOSCO) will be on line by the late 1980s producing more than 80,000 BPD combined. Beyond this estimate, however, it is far too early to predict production capacity arising from projects of the current two or any future solicitations.

Question 10: Do you think that the very possibility that cheap or free government money might be available for a synfuel project might actually *inhibit* a private company from putting up its *own* money for a synfuel plant?

Answer 10: The availability of Corporation assistance could encourage private firms to seek assistance when they otherwise might proceed independently. However, the Corporation will be carefully evaluating and intensively negotiating project assistance requests to assure that only the minimum assistance necessary for a project to proceed is provided and that project sponsors cannot obtain credit elsewhere. Therefore, Corporation assistance would actually *encourage* and *increase*, rather than inhibit or reduce, the commitment of private financial resources to assisted synthetic fuel projects, which might not otherwise proceed. Some companies have expressed the concern that their unassisted projects may be competing with others assisted by the Corporation, that is subsidized in capital or in purchase price.

Question 11: I would expect that chemical companies would be most likely to have the expertise necessary to construct a synfuel plant; after all, changing coal or shale into liquid fuels is a chemical reaction, right? Why aren't the chemical companies more involved than they are? (The big chemical and oil companies are not well represented in the 11 candidate projects.)

Answer 11: The production of synthetic fuels generally requires capabilities and experience with large scale chemical processing and materials handling similar to that required for chemical production or oil refining. Some of the eleven projects presently undergoing a strength review under the Corporation's Initial Solicitation include oil companies on the sponsor team. The eleven projects and their sponsors are listed in Exhibit M. Moreover, as projects develop further, additional projects involving chemical or oil concerns may be proposed, or ongoing projects may acquire additional such equity sponsorship.

Question 12: I thought you people were going to run the SFC like a business. You are supposed to be in the business of providing loans and other guarantees to synfuels plants; but you are acting like the normal government agency instead of bankers. Your own government engineers are telling the private firms how to do a synfuel plant. Do bankers normally get into the chemical and engineering details of the conversion process? Why don't you set specifications for several types of synfuels plants and ask for bids? Then you could accept the lowest bid, fire all your engineers, and save the taxpayer's money.

Answer 12: Like any prudent businessman or banker, the Corporation is carefully evaluating the strength and viability of the projects it is considering for assistance. Part of this evaluation includes assessments by the Corporation's staff of technical risk and viability as well as of project cost estimates. Such evaluations are particularly valuable and appropriate for loan or loan guarantees where project strength and technical viability affect the likelihood for any outlays by the Corporation; private banks routinely evaluate project strength for major loans. However, the greater the proportion of private equity at risk for a project the more the Corporation can rely on private market incentives to assure sound projects and expeditious progress. For example, when assistance is limited to a price guarantee incentive, Corporation payments will occur only if there is actual production. Technical and cost risks remain on the project sponsors. Accordingly, there is less need for detailed project assessments by the Corporation.

Answer 12: (Cont'd) The Corporation does not expect to set specifications for plants and ask for bids to build the plants as if the Corporation were going to build or own the plants. Our policy and practice is to respect the private sector's knowledge and initiative. We are not "telling the private firms how to do a synfuel plant". However, the Corporation is considering the merits of alternative solicitation approaches for part of its program, including the use of competitive bids for price guarantees for particular project types.

The Corporation's technical assessments are focused on evaluating technical viability and risk, not suggesting technical alternatives to private sponsors who are risking their own money. Detailed technology and project choices properly remain the responsibility of private project sponsors. This limited evaluation role of the Corporation's technical staff is prudent, businesslike, and appropriate in light of the risks being assumed with taxpayer money.

Question 13: It's going to cost between $50 and $80 per barrel of oil-equivalent to change shale or coal to oil, right? I hope you aren't going to produce much; you're just going to fund small prototype demonstrations, right? I hope you aren't going to fund great big, money-losing white elephants.

Answer 13: The Corporation fully intends to follow the dictates of the Energy Security Act. The Act provides for production, not prototype or demonstration assistance.

Furthermore, it is not indicated that a large project will necessarily require more support from the Corporation on a per barrel basis. It may be possible to provide financial assistance in a modest way to a very large corporation which is building a large project, thus achieving the requirements in the Energy Security Act of the least commitment of financial assistance and the requirement for maximizing BOE per day.

Question 14: Why are you providing loan guarantees to money-losing projects? Won't you be forced to send good money after bad -- like Chrysler or Poland? Why not offer price guarantees only?

Answer 14: We have not provided loan guarantees or any other assistance to any projects. Price guarantees or loan guarantees may each be appropriate for a specific risk and type of project. The Corporation will seek to minimize the financial exposure of the Synthetic Fuels Corporation.

Question 15: If we imposed a $5 or $10 per barrel oil import fee, would we really need a Synthetic Fuels Corporation? Why?

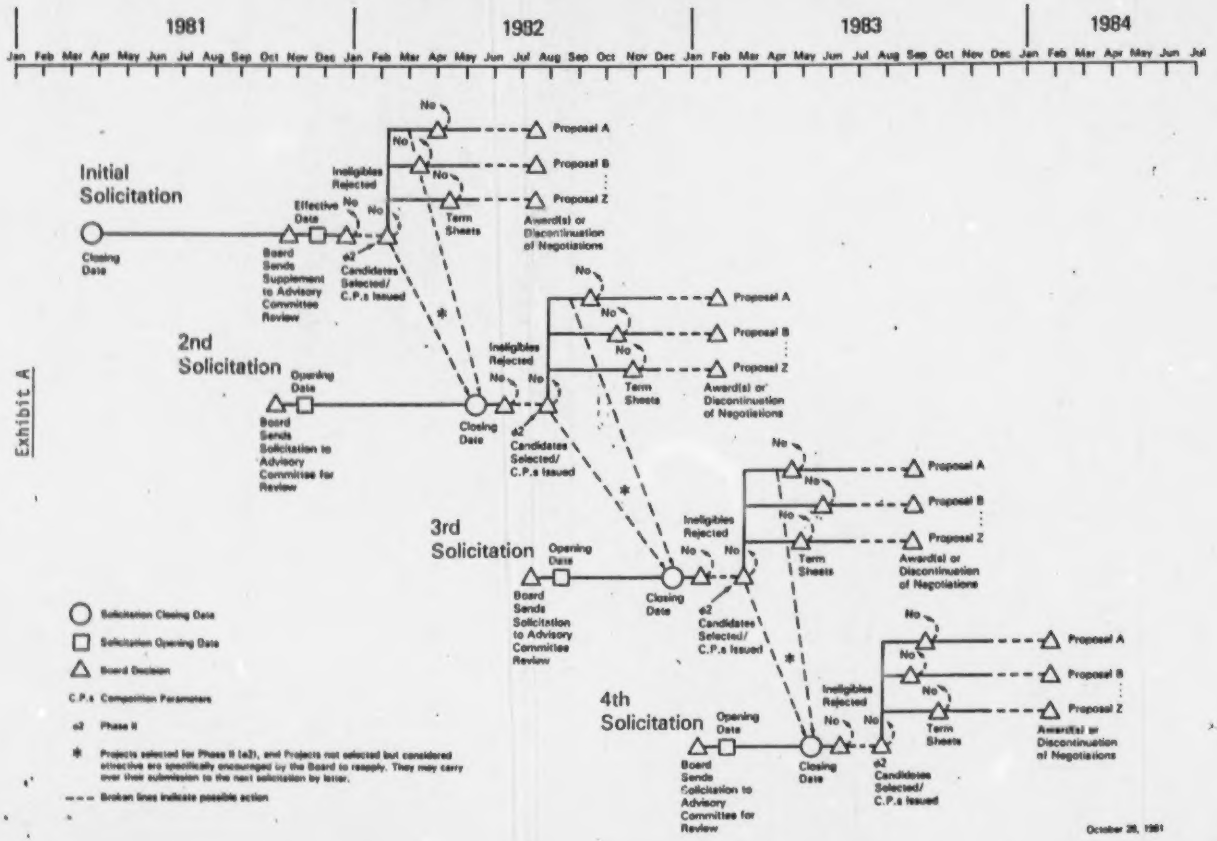
Answer 15: There are many varying views of the impact an oil import fee might have on the economy, especially as it relates to conservation and production of energy from domestic resources. While the question to impose an oil import fee is outside the purview of the Corporation, we do recognize the effect on conservation such a fee would have, especially if the fee is passed through to the consumer. Our mission at the Corporation is to encourage the development by the private sector of commercial synthetic fuels production-capability from domestic resources. We are earnestly pursuing that mission.

ATTACHMENTS

QUESTION #		EXHIBITS
1(a)	Solicitation Chart	A
2	Strategic Planning Briefing Paper	B
3	GAO Response	C
3	Moffett Environmental Response	D
3(a)	EPA/SFC M.O.U.	E
3(c)	Other Interagency Agreements	F,G,H,I,J
4(a)	Names of Actual and Proposed Study Panel Members	K
4(a)	Study Panel Correspondence	L
11	Eleven "Maturity Criteria" Passed Projects	M

Exhibit A

SOLICITATION PROCEDURES


1981
1982
1983
1984
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul
Initial Solicitation
Closing Date
Board Sends Supplement to Advisory Committee Review
Effective Date
No
ø2 Candidates Selected/ C.P.s Issued
Ineligibles Rejected
No
Term Sheets
Proposal A
Proposal B
Proposal Z
Award(s) or Discontinuation of Negotiations
*
2nd Solicitation
Opening Date
Board Sends Solicitation to Advisory Committee for Review
Closing Date
3rd Solicitation
Board Sends Solicitation to Advisory Committee Review
4th Solicitation
Board Sends Solicitation to Advisory Committee for Review
Solicitation Closing Date
Solicitation Opening Date
Board Decision
C.P.s Competition Parameters
ø2 Phase II
* Projects selected for Phase II (ø2), and Projects not selected but considered attractive are specifically encouraged by the Board to reapply. They may carry over their submission to the next solicitation by letter.
Broken lines indicate possible action

October 28, 1981

Exhibit B

UNITED STATES SYNTHETIC FUELS CORPORATION
STAFF BRIEFING FOR THE BOARD
ON
PROGRAMMATIC STRATEGIES

FEBRUARY 16, 1982

- On January 18, 1982, the Board heard a staff briefing on "Strategic Matters" managed by the Planning Office within a senior staff Task Force chaired by the President, Mr. Schroeder.

- In that briefing, the staff
  - -- Discussed the production and diversity objectives of the Energy Security Act, and recommended "that the Board be prepared to trade off some near-term production for the enhanced diversity that will assure the industry's longer-term production potential."
  - -- Invited the Board to comment on or redirect the staff's thinking on the production/diversity question and on the proposed approach to defining diversity operationally, and developing its programmatic implications.

- Since the January meeting the staff Task Force has continued on its proposed course. The purposes of this presentation are to
  - -- Ask the Board formally to
    - Accept the staff's January 18, 1982 recommendations with respect to diversity.
    - Emphasize the importance of maintaining an open, competitive project solicitation/selection process,
    - Direct the staff to continue developing programmatic options for Board consideration.
  - -- Discuss the various dimensions of diversity.
  - -- Outline a workplan and timetable leading to definition of program issues and options for Board consideration.

REVIEW OF JANUARY 18, 1982 PRODUCTION/DIVERSITY DISCUSSION

- Production and diversity are complementary to the extent that diversity in early projects increases the feasibility of ultimate large-scale production.
  - If more commercial production options are demonstrated, the industry can expand more quickly and economically.
  - But, with limited budget and time, an emphasis on diversity could result in less near-term production, so that some trade offs may be necessary.
- An emphasis on near-term production in initial Corporation actions would probably mean
  - Concentration on lowest-cost resources, lower-risk technologies, and large projects that can get underway in the next couple of years.
  - Lower cost/assistance per unit of production, lower technological risk, and simplified project selection criteria.
  - More near-term production, although, in light of present industry status, practical leadtimes, and market conditions, not enough to accomplish the 1987 national production goal of 500,000 barrels per day.
- An emphasis on diversity in initial Corporation actions would probably mean
  - Inclusion of some higher-cost resources, higher-risk processes, and more projects of smaller average size.
  - Cost/assistance levels that are higher per unit of product but, on average, lower per project.
  - More options explored, demonstrated and improved, providing more assurance that production can be expanded more aggressively to large scale.
- After considering these factors in relation to the basic objectives of the Energy Security Act, the staff recommends that initial Corporation actions emphasize diversity, to establish capability for expansion and long-term production, even if this means that near-term production may be less than it otherwise might be.

"DIVERSITY" AS IT APPEARS IN THE ENERGY SECURITY ACT

o In the Energy Security Act (Sec. 100(b)), Congress stated that

-- The purposes of the Act are "to improve the Nation's balance of payments, reduce the threat of economic disruption from oil supply interruptions and increase the Nation's security by reducing its dependence upon imported oil."

-- "These purposes can be served by" (among other things)

- "Demonstrating at the earliest feasible time the practicality of commercial production of synthetic fuel from domestic resources employing the widest diversity of feasible technologies;"

- "Fostering the creation of commercial synthetic fuel production facilities of diverse types..."

o Elsewhere, the Act refers to diversity in directing the Corporation or its Board to

-- "Incorporate a technological diversity of processes, methods and techniques for each domestic resource that offers significant potential for use as a synthetic fuel feedstock..." (Sec. 126(a)(2)(A)).

-- "Consider Øin the comprehensive strategy† all practicable means for the commercial production of synthetic fuels from domestic resources, employing the widest diversity of feasible technologies" (Sec. 126 (b)(1)(A)).

-- Issue an initial "set of solicitations Øthat† shall encompass a diversity of technologies (including differing processes, methods and techniques) for each potential domestic resource..." (Sec. 127(a)(3)).

-- "Consider, in awarding financial assistance, ... the diversity of technologies (including differing processes, methods and techniques)..." (Sec. 131(b)(3)).

o In addition to these specific references to diversity, the Act directs the Corporation, in awarding financial assistance, to

-- Consider the "overall production potential of the technology, considering the potential for replication, the extent of the resource and its geographic distribution, and the potential end use." (Sec. 131(b)(3)(B)(ii)).

-- "Give due consideration to promoting competition." (Sec. 131(b)).

Defining Diversity Operationally

"DIVERSITY" AS A LOGICAL MEANS TO THE ESA'S ENDS

o The language of the Energy Security Act cited on the previous page indicates that, in the Act, diversity

- Is not a purpose or an end in itself, but is intended to serve the purposes of the Act.
- Refers primarily to different significant resources and technologies.
- Includes geographic and end use dimensions only insofar as these affect the "overall production potential of the technology" (Sec. 131(b)(3)(B)(ii)).
- Allows/requires considerable Board judgment about how best to accomplish the purposes of the Act.

o A logical operational approach can be developed which is consistent with the legislative definition of diversity, and which treats diversity as an instrument for enhancing the nation's capability to produce synthetic fuels. Diversity is essential in the early stages of the national synthetic fuels program because

- The synthetic fuel resource bases that now appear most economical (e.g., western oil shale, heavy oil) may be limited in rate of growth or ultimate size by resource, environmental or socioeconomic factors.
- Applicable commercial production experience is necessary to develop the capability to expand production rapidly and efficiently from any of the potential fuel resource bases.
- The best resource bases for providing a commercial synthetic fuel capability and the best methods for developing each, will not be known until a range of promising methods is tried for each of the promising resource bases.

o Factors such as these provide a factual and logical basis for considering the various possible dimensions of diversity, so that a Corporation emphasis on diversity

- Results in a disciplined, cost-effective program.
- Enhances competition within and among appropriate diversity categories.
- Remains consistent with the Act's purposes and directives.

Defining Diversity Operationally

"DIVERSITY" IN WHICH DIMENSIONS?

There are many different types or dimensions of diversity. A logical operational approach can be developed which is consistent with the legislative language regarding priorities among the various possible dimensions of diversity.

- The highest priority dimension of diversity is diversity of resource bases, including a geographic component in the definition of resource base.
  - The factors that may limit the rate of growth and ultimate size of synthetic fuels production (other than cost/price relationships) are largely resource- and region-specific.
  - The commercially-established domestic resource base for synthetic fuels must be large enough in total to support rapid growth and large-scale production for a significant period of time.
  - Commercial production must be feasible over a large enough geographic area that environmental and socioeconomic impacts that may be associated with rapid growth and large-scale production are manageable.
- The technological dimension of diversity is of importance as a means of ensuring that a large and geographically dispersed national resource base is technically and commercially available to support expansion of synthetic fuels production.
  - It is not generally necessary to have more than one "good" way to do something, e.g., to produce gasoline from a certain type of coal.
  - Encouraging development of more than one method to do the same thing may be advisable when there is
    - Risk of technical failure in each method.
    - Prospect of significant economic improvement.
    - Advantage in competition among technologies.
  - Thus, additional diversity in technology should be pursued when doing so has a good chance of adding to or improving the basic options available for using domestic resources to reduce oil imports.

"Diversity" in Which Dimensions (Cont.)

o Diversity in products as such has little programmatic significance and the market can generally determine the best combination of products for any project and for the industry overall.

- -- The producing/refining and end-use sectors of the energy system are highly flexible, so that large changes in physical supply/demand relationships can be accommodated.
- -- All of the commonly-proposed synthetic fuel products have similar impacts on oil imports, and if any one product begins saturating its market, the price outlook will adjust to reflect this.
- -- Most synthetic fuel resources/technologies can be used to produce a broad range of products in various combinations, so that knowledge/experience gained producing one product mix is largely applicable to other product mixes.
- -- Special care must be taken in estimating product values where market structure could change or uncertainties are particularly large.

o One approach to defining diversity operationally is establishing appropriate categories and subcategories in terms of the several important dimensions of diversity, and then setting priorities among them.

- -- Basic resource categories can be defined. (This has been done in the initial solicitation.) Then priorities can be set among these on the basis of near-term economics and long-term potential.
- -- "First-level" subcategories can be defined within the more important resource categories, on the basis of geographic regions and technical processability, and then priorities set among them.
- -- In setting priorities on these first level resource subcategories, trade-offs will have to be made between marginally-important resource categories and subcategories based on important resource characteristics.
- -- The initial programmatic objectives might be defined to seek practical experience with at least one method for producing synthetic fuel from each of the most promising first level resource subcategories, with more than one technological approach pursued where risks or economics indicate.
- -- As information, experience and actual projects accumulate, increasingly detailed subcategories might be defined on the basis of resource and technology characteristics.

PURSUING DIVERSITY IN A COMPETITIVE, MARKET-ORIENTED WAY

- In defining and pursuing diversity, the Corporation should
  - Maintain an open, competitive project solicitation and selection process
  - Avoid involvement in technical and business decisions that should be left to the market
- However, in a thoughtful, step-by-step strategy for accomplishing diversity could enhance competition among projects and minimize Corporation involvement in those decisions best left to sponsors.
  - Competitive subcategories can be broadly defined, especially initially, making only those distinctions essential for programmatic reasons, e.g.,
    - Perhaps all shale projects should compete initially,
    - Perhaps no product distinctions should be made initially.
  - The Corporation's programmatic subcategories, even when/if they become narrower, can be defined functionally, avoiding technical terms, letting sponsors make the detailed technical decisions, e.g.
    - Projects using eastern caking coals
    - Projects producing transportation liquids
    - Projects using any gasifier except type X.
- If the Corporation states its programmatic objectives clearly and in sufficiently broad functional terms
  - All projects accomplishing the same programmatic objectives, whatever their differences in other dimensions, might compete on the basis of a relatively few objective parameters, e.g., total assistance required, level of price guarantee.
  - Sponsors, in the early, more flexible stage of project definition, might have more opportunity to shape projects to meet the Corporation's broad objectives, resulting in more comparable, competitive projects.
  - Staff review of specific projects can concentrate on assessing technical and economic viability, rather than on programmatic factors, which will be determined by the Board itself in setting programmatic categories.

RESOLUTION ON DIVERSITY

Be it hereby

RESOLVED, that the Board adopts the staff's recommendation of January 18, 1982 that the Board be prepared to trade off some near-term production for the diversity that will improve the industry's capability for expansion and long-term production,

- -- In accord with a well-thought-out strategy that defines and lays out an approach for accomplishing the amount and type of diversity that is necessary to advance the purposes of the Energy Security Act,
- -- Becoming more definitive about objectives and approach as information and experience accumulate, and
- -- Maintaining free and open competition;

and further

RESOLVED, that the Board hereby directs the staff, acting through and under the direction of the Chairman, to continue developing and analyzing programmatic options for defining and implementing such diversity, and to report results and recommendations to the Board in a timely fashion.

WORKPLAN FOR DEVELOPING PROGRAMMATIC STRATEGY OPTIONS

- o Over the next several weeks and months, under the management of the Planning Office within a senior staff Task Force, the staff will continue working to develop for the Board's consideration more detailed options regarding programmatic plans and future solicitation strategies.

- o In conjunction with the Corporation's Planning staff, the Task Force, will plan, coordinate and synthesize this work.

    - -- In-house staff and data (including where appropriate information contained in proposals before the Corporation) will be used to the maximum extent possible.

    - -- Under staff managmement, consultants and contractors with specialized knowledge and capabilities will be utilized to develop specified data and perform analytic tasks.

    - -- Members of the Corporation's Advisory Committee may be asked to provide information in relation to various matters within their expertise.

    - -- Groups of external experts representing a wide range of skills and perspectives will be consulted throughout the effort.

    - -- Periodic reports will be made to the Board on progress, interim results and any staff recommendations.

- o This work will include the approach outlined in the January 18, 1982 Board briefing to analyze and define priority categories of resource/technology combinations.

    - -- Resource bases will be analyzed in terms of technical processability, environmental/socioeconomic factors, production cost/potential.

    - -- Basic technological options will be reviewed for status, risk, applicability, environmental aspects.

    - -- Alternative resource/technology combinations will be identified and analyzed in terms of their ability to provide the required national experience/capability.

    - -- Synthetic fuel product technologies and markets will be analyzed to identify important differences and opportunities.

Workplan for Developing Programmatic Strategy Options

-- Priorities will be suggested among the various categories, including as far as possible allocations of financial assistance, number of projects, or anticipated production by category.

o The work will also investigate alternative project solicitation/selection strategies

-- For example, targeted solicitations and competitive bidding on standard price guarantee contracts may be desirable ways to implement the diversity objectives set by the Board.

-- Technical studies will be combined with interviews with industry and finance people to assess the feasibility/desirability of such strategies.

o Development of these programmatic options will be a dynamic, evolving process,

-- Producing some initial plans/strategies within a few months.

-- Leading eventually to the comprehensive strategy to be submitted to Congress in 1984.

Exhibit C

United States Synthetic Fuels Corporation
1900 L Street, N.W. Washington, District of Columbia 20586 Telephone: (202) 653-4400

November 25, 1981

The Honorable Milton J. Socolar
Acting Comptroller General
of the United States
General Accounting Office
Washington, D.C. 20548

Dear Mr. Socolar:

In your letter forwarding a copy of the GAO's report "Unresolved Issues Resulting from Changes in DOE's Commercialization Program" you suggested that the Corporation publish guidelines with respect to the environmental monitoring provisions of the Energy Security Act. At the present time I believe the guidelines would be redundant in some respects and premature in others.

Your letter suggests the proposed guidelines should indicate who should initiate the contacts between the project sponsors and DOE, EPA and state agencies, and when the initial contacts should occur. The Energy Security Act provides that project sponsors bear the burden of developing monitoring plans after they have consulted with the relevant agencies. The draft solicitation documents approved by the Board of Directors at its October meeting repeat this requirement. The timing of such consultation will depend on the developmental maturity of each project, and only mature projects may be admitted to Phase II evaluation under the solicitations.

You also suggest the guidelines cover "how the SFC will negotiate and reach agreement on acceptable environmental monitoring systems." The Corporation's Board of Directors will not be in a position to decide which projects to advance to Phase II under the initial solicitation until February of 1982. Preparation of financial assistance agreements will only begin some months later. Even then the Act provides that the agreements need only contain a future-looking covenant requiring the sponsors' development of an acceptable plan. In the meantime the staff of the Corporation will meet with EPA and DOE to determine what guidelines they have developed and what their needs are. As these become apparent it may be possible for the Corporation's Board to be more concrete about what sort of monitoring plans might be found acceptable.

In closing, let me thank you for your suggestions and assure you that the Corporation intends to carefully implement its responsibilities for the appropriate environmental monitoring of assisted projects.

Sincerely,

Edward E. Noble
Chairman of the Board

cc: Secretary of Energy
Administrator of EPA
Senate Committee on Energy and Natural Resources
Senate Committee on Governmental Affairs
House Committee on Energy and Commerce
House Committee on Governmental Operations

Exhibit D

2. Q. Will the SFC require proposer to implement environmental controls for carcinogenic, toxic or otherwise dangerous materials even if federal and state agencies have yet to establish standards for those materials? Please describe fully the process to be used to assure that these controls are installed and are effective.

2. A: The Corporation's Supplement to its Initial Solicitation states that "in its evaluations, the Corporation will attempt to select those projects that minimize in a cost effective manner environmental... impacts" and that the Corporation will consider whether the proposer proposes an effective and economical approach, acceptable to permitting agencies, to abatement of environmental and health related emissions from the construction and operation of the project". (Emphasis added).

Section 171(b) of the Energy Security Act states that "...the Corporation shall have no legal authority, power, or purpose...to engage in any other activities of a business, commercial, financial or investment nature or perform any other governmental functions; and any violation of this subsection shall be punished by fine...or imprisonment."

Exhibit E

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON. D.C 20460

FEB 9 1982

THE ADMINISTRATOR

Mr. Victor A. Schroeder
President and Chief Operating Officer
United States Synthetic Fuels Corporation
1900 L. Street, N.W.
Washington, D. C. 20586

Dear Mr. Schroeder:

Enclosed are two copies of the Agreement Between the United States Synthetic Fuels Corporation and the United States Environmental Protection Agency.

Per discussions with Larry Garrett of your Office, we have increased the overhead rate for leave and fringe benefits from 3% to 10%. I have initialed this change and executed both copies of the Agreement. After Chairman Noble initials the change on the copies, please send one copy back to my attention.

This Agreement should serve to build a very useful relationship between our organization. John W. Hernandez, Jr., Deputy Administrator, and I look forward to working with you in the future.

Sincerely yours,

Anne M. Gorsuch

Enclosures

AGREEMENT BETWEEN
THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AND
THE UNITED STATES SYNTHETIC FUELS CORPORATION

THIS AGREEMENT, dated as of November 3, 1981, between the UNITED STATES SYNTHETIC FUELS CORPORATION (the Corporation) and the UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA), provides as follows:

I. Recitals

The Energy Security Act, 42 U.S.C. Section 8701 (1980 Supp.), established the Corporation to accelerate the development of a synthetic fuel industry in the United States. In order that the Corporation might best achieve this mandate, the Act provided in Section 172(a) that "the Corporation may seek the advice and recommendations of, or information or data maintained by, any Federal department or agency to assist the Corporation in determinations to be made hereunder." 42 U.S.C. Section 8772(a). Moreover, the Act expressly empowered the Corporation in Sections 171(a)(9) and (11) to reimburse any such agency for services rendered to the Corporation. 42 U.S.C. Section 8772(a)(9), (11). The purpose of this Agreement is to establish the procedures under which future agreements between the Corporation and EPA for consultant services will be executed and implemented.

II. Administration

1. EPA agrees to use its best efforts, taking into account its primary mission, to provide consultant services to the Corporation.

2. Such consultant services will be provided only pursuant to Requisitions for Consultant Services entered into by the Corporation and EPA. The terms of the Requisition for Consultant Services will be consistent with the terms of this Agreement.

B. Requisition Orders

1. The Corporation will submit to EPA a written Requisition for Consultant Services.

2. The Requisition for Consultant Services will state the level of support required for personnel services, the amount to be reimbursed to EPA for providing the personnel services and the start and completion dates.

3. The Requisition for Consultant Services will be executed between the Chief Financial Officer of EPA, or his designee, and the Chairman of the Board of the Corporation, or his designee. The Chief Financial Officer, or designee, will execute the Requisition for Consultant Services with the concurrence of the appropriate Assistant Administrator (or equivalent).

4. Copies of any designations made by the Chairman or the Chief Financial Officer will be provided to the other party.

C. Reimbursement

1. EPA will be reimbursed for providing the consultant services as follows: (i) personnel services will be rendered and charged on an hourly basis using the employees' hourly rate at the time the services are performed, and (ii) an overhead rate of ~~3%~~ 10% for leave and fringe benefits will be added to the direct labor cost.

2. The Corporation will submit an original and two copies of the Requisition for Consultant Services to EPA. Three copies of the executed Requisition for Consulting Services will be provided to the Corporation.

3. Both the Corporation and EPA will maintain records necessary for all billings.

4. EPA will submit its billings, together with supporting documentation, to the Vice President for Administration and Treasurer of the Corporation. The submission will be no later than the fifth working day following the end of the month reported. EPA will consolidate the billings and invoice the Corporation monthly through Standard Form 1081. If EPA's and the Corporation's records agree, the Corporation will promptly submit its payment to Morgan Kinghorn, Controller, United States Environmental Protection Agency, Waterside Mall Building, 401 M Street, S.W., Washington, D.C. 20460. If EPA's and the Corporation's records are not in agreement, the Chief Financial Officer of EPA, or his designee, and the Chairman of the Board of the Corporation, or his designee, will decide on a billing amount that is satisfactory to both parties, and the Corporation will then make payment in the manner provided above.

III. Term of the Agreement

This Agreement is effective as of the date hereof. This Agreement will end upon either party giving thirty working days notice to the other. In that event, all Requisitions for Consulting Services will continue until completion unless the parties agree otherwise.

UNITED STATES SYNTHETIC FUELS CORPORATION

By: ____________________

UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY

By: ____________________

EXHIBIT F.

United States Railway Association REIMBURSABLE AGREEMENT	1. Contract No.

2. Parties to the Agreement

a. Reimbursing Organization	b. Organization to be Reimbursed
United States Synthetic Fuels Corporation 2000 L Street, NW Washington, DC 20586	United States Railway Association 955 L'Enfant Plaza North, SW Washington, DC 20595 ATTN: USR-43 ~~Office of Accounting~~

3. Effective Date	4. Cost (Estimated)		5. Appropriation Chargeable
	a. Fiscal Year	b. Amount	
December 1, 1981	FY 1982	Not to exceed $10,000	

6. Description of Service and Terms of Agreement

At the request of the United States Synthetic Fuels Corporation (Corporation), the United States Railway Association (Association) agrees to make available, on a part-time basis, Association employees to advise and assist the Corporation. Such employees will receive assignments from the Corporation's Vice President for Administration and Treasurer who will determine the nature and scope of tasks, which are expected to cover the full range of administrative management policies and practices. This support is anticipated to extend from December 1, 1981 through May 31, 1982.

The Association will submit monthly invoices for payment of actual hours worked by individual employees, plus local transportation costs incurred between Association and Corporation offices. The rate for actual hours will be determined by computing the direct salary plus 30% to cover fringe benefits costs.

7. Authorized Approvals

a. For Reimbursing Organization	b. For Organization to be Reimbursed
Signature Dwight Ink Dwight Ink	Signature William H. Bozman
Title Vice President for Administration	Title Vice President for Administration
Date 1-21-81	Date

Exhibit G

AGREEMENT BETWEEN
THE UNITED STATES DEPARTMENT OF ENERGY
AND
THE UNITED STATES SYNTHETIC FUELS CORPORATION

I. Background

The Energy Security Act (Pub. L. No. 96-294) established the United States Synthetic Fuels Corporation (Corporation) to accelerate the development of a synthetic fuel industry in the United States. The Energy Security Act also gave the President authority for a "Fast Start" interim program using existing Federal departments to expedite the development and production of synthetic fuels to meet national defense needs. To meet this goal, and to provide for an orderly transition of synthetic fuel responsibilities to the Corporation, the President delegated certain of his authorities under the Energy Security Act to the Secretary of Energy in Executive Order 12242.

Thus, the Department of Energy (DOE) and the Corporation are partners in this country's efforts to accelerate the development of the synthetic fuels industry. In order to exercise the DOE's and the Corporation's respective responsibilities in an economic and efficient manner, it will be helpful for both parties to provide their resources to each other under appropriate circumstances. The purpose of this agreement is to establish the procedures under which future agreements to provide resources will be executed and implemented.

II. Authority

Sections 171 and 172 of the Energy Security Act.

III. Definitions

a. Goods: Supplies, services, material and furniture furnished to the one party to the agreement from the other party's inventory or by contractual arrangement exclusively for the requisitioning party. Reimbursement will be based on the actual cost of the goods provided.

b. Consultant Services: Personnel furnished by the requisitioned party's employees directly in support of the requisitioning party. Such services will be recorded and charged on an hourly basis using the employees' hourly rate at the time the services are performed. An overhead rate of 32% for leave and fringe benefits will be added to the direct labor cost.

c. Administrative Surcharge: A 5% factor added to the total costs of goods and services (direct labor and overhead) to cover the use of equipment, furniture and supplies used by the requisitioned party's employees supporting the requisitioning party, maintaining cost records, preparing bills and performing related accounting functions; telephone service; government furnished transportation; and other types of government services that cannot economically be pro rated or recorded on an actual basis for subsequent reimbursement.

d. Requisitioned Party: The party to the agreement that provides the goods or consulting services.

e. Requisitioning Party: The party to the agreement that is provided with the goods or consulting services.

IV. Administration

A. General

1. The Corporation and DOE agree to use their best efforts, taking into account the respective parties' primary mission, to supply goods or provide consultant services to each other.

2. Such goods and consultant services will be provided pursuant to Requisitions for Goods or Consultant Services entered into by the Corporation and DOE. The terms of the Requisition for Goods and Consultant Services will be consistent with the terms of this agreement, and when DOE is the requisitioning party, with DOE procedures.

B. Requisition Orders

1. The requisitioning party will submit to the requisitioned party a Requisition for Goods or Consultant Services.

2. The Requisition for Goods or Consultant Services will state the level of support required for personnel services, describe the specification of the goods to be supplied, the amount to be reimbursed to the requisitioned party for providing the goods or personnel services, and the start and completion dates.

3. The Requisition for Goods or Consultant Services will be executed between the Chief Financial Officer or designee, and the Chairman of the Board of the Corporation, or his designee. The Chief Financial Officer, or designee, will execute the Requisition for Goods or Consultant Services with the concurrence of the appropriate Assistant Secretary (or equivalent) and the Under Secretary.

4. Copies of any designations made by the Chairman or the Chief Financial Officer will be provided to the other party.

c. Reimbursement

1. The requisitioned agency will be reimbursed for supplying the goods or providing the consultant services. DOE, however, will not be so reimbursed where funds have been appropriated to DOE for the purpose of providing for such goods or consultant services.

2. The amounts to be reimbursed will be in accordance with the formula set forth in paragraph III.

D. Documentation

1. The requisitioning party will submit an original and two copies of the Requisition for Goods and Consultant services to the requisitioned party. Three copies of the executed Requisition for Goods and Consulting Services will be provided to the requisitioning party.

2. The requisitioned party will maintain records necessary for subsequent billings.

3. The billings, together with supporting documentation, will be submitted to the DOE Office of Finance and Accounting (OFA/WFSD), Washington Financial Services Division (CR-46), Germantown, Maryland, if DOE is the requisitioned party; or if the Corporation is the requisitioned party, to the Treasurer of the Corporation. The submission will be no later than the fifth working day from the end of the month reported.

E. Billings

1. If DOE is the requisitioned party, the DOE Office of Finance and Accounting, Washington Financial Services Division, will consolidate the billings and invoice the Corporation monthly through Standard Form 1081. The Corporation will promptly submit its payment to OFA/WSD for payment and reimbursement to DOE.

2. If the Corporation is the requisitioned party, the Treasurer of the Corporation will consolidate the billings and invoice DOE monthly. DOE will promptly certify the invoice and submit it to the United States Treasury for payment and reimbursement (check) to the Corporation.

V. Term of the Agreement

This agreement is effective October 8, 1980. This agreement will end upon either party giving thirty working days notice to the other. In that event, all Requisitions for Goods and Consulting Services will continue until completion unless the parties agree otherwise.

DATE 11/13/80

Chairman
United States Synthetic Fuels
Corporation

DATE 11/2/80

C W Duncan Jr
Secretary of Energy

U.S. SYNTHETIC FUELS CORPORATION

REQUISITION FOR GOODS AND CONSULTANT SERVICES

REQUISITION NO._____

I. AUTHORITY Managerial and support agreement between Synthetic Fuels Corporation and Department of Energy dated ________________.

II. IDENTIFICATION:

Requisition Title ______________________________

Estimated Start Date ________________ and Completion Date _________________.

III. REQUISITION DESCRIPTION:

IV. ESTIMATED AMOUNT $__________________ HOURS ________

U.S. SYNTHETIC FUELS CORPORATION:

Authorized Requisitioning Official ____________________

Project Manager __________________ Telephone No. _________

DEPARTMENT OF ENERGY:

Accepted By: __________________________________
Authorized Requisitioned Official

Assigned To: __________________________________

This Requisition is Subject to Force Majeure.

U.S. DEPARTMENT OF ENERGY

REQUISITION FOR GOODS AND CONSULTANT SERVICES

REQUISITION NO. ____

I. AUTHORITY Managerial and support agreement between Synthetic Fuels Corporation and Department of Energy dated ____________________.

II. IDENTIFICATION:

Requisition Title ________________________

Estimated Start Date _______________ and Completion Date _______________.

III. REQUISITION DESCRIPTION:

IV. ESTIMATED AMOUNT $_______________ HOURS ________

DEPARTMENT OF ENERGY:

Authorized Requisitioning Official _________________

Project Manager _______________ Telephone No. ________

U.S. SYNTHETIC FUELS CORPORATION:

Accepted By: ______________________________
Authorized Requisitioned Official

Assigned To: ______________________________

This Requisition is Subject to Force Majeure.

Exhibit H

NASA

National Aeronautics and
Space Administration

Washington, D.C.
20546

JAN 27 1982

Reply to Attn of: B

Mr. Dwight A. Ink
Vice President, Administration
United States Synthetic Fuels
  Corporation
1900 L Street, NW
Washington, DC 20586

Dear Mr. Ink:

This will acknowledge your letter of January 19, 1982, agreeing to the reimbursement for salaries and related overhead expenses incurred. I have asked our Financial Management Division to make arrangements for the necessary paperwork. It is my understanding that the services of Mr. Charles are as indicated in your letter, to be one-half time for up to sixty days beginning on January 11, 1982. It was also my understanding that the clerical support provided to Mr. Charles was a one time event and that future requirements for this type of support will be provided by other sources.

I am pleased we have been able to provide this support and trust these arrangements are satisfactory.

C T Newman
C. Thomas Newman
Comptroller

Exhibit I

United States Synthetic Fuels Corporation
1900 L Street, N.W. Washington, District of Columbia 20586 Telephone: (202) 653-4400

January 21, 1982

Mr. David H. Hornestady
Director of Personnel
NASA
Washington, D.C. 20546

RE: Mr. Keith Charles

Dear Mr. Hornestady:

This letter will serve to document our oral understanding between the United States Synthetic Fuels Corporation and NASA concerning Mr. Keith Charles.

It was agreed that effective January 12, 1982, Mr. Keith Charles will work half-time on a flexible schedule for the United States Synthetic Fuels Corporation in budget development and formulation work. This arrangement will be in effect for 60 to 90 days but will not extend beyond April 12, 1982, unless an additional agreement is reached.

It is our understanding that Mr. Charles's time will be back charged to the United States Synthetic Fuels Corporation based upon an annual salary rate of $46,685. The bills for Mr. Charles's time while working for the United States Synthetic Fuels Corporation should be forwarded to my attention.

If you have any questions concerning this matter please contact me at 653-4553. We very much appreciate yours and NASA's assistance in this matter.

Sincerely,

Sondra J. Gillice
Director-Personnel

bcc: Dwight A. Ink
Mary Semrad

Exhibit J

United States Synthetic Fuels Corporation
1900 L Street, N.W. Washington, District of Columbia 20586 Telephone: (202) 653-4400

January 19, 1982

MEMORANDUM FOR NASA COMPTROLLER
Washington, D.C.

FROM: Vice President-Administration
U.S. Synthetic Fuels Corporation
Washington, D.C.

SUBJECT: Reimbursable Services Provided by NASA

The purpose of this memorandum is to verify our agreement regarding the temporary reimbursable detail of Keith Charles, Chief, STS Analysis Branch, Office of the NASA Comptroller, to the U.S. Synthetic Fuels Corporation and for support you provided the Corporation in typing our FY 82/83 Program Status and Administrative Expenses Statement.

The detail of Mr. Charles is estimated to be on a half-time basis for the period of 30 to 60 days which began on January 11, 1982. It is understood and hereby agreed that the Corporation will reimburse NASA for Mr. Charles' salary and benefits and that Mr. Charles will be authorized to directly bill the Corporation for any related expenses such as travel, parking, etc.

It is also hereby understood and agreed that the Corporation will reimburse NASA for overtime, salaries, benefits, and related expenses incurred in the aforementioned typing support.

Please forward a statement of charges detailing separately the charges for salary, benefits, and other related expenses to my office. Thank you for your support.

Sincerely,

Dwight Ink

Dwight A. Ink
Vice President
Administration

Exhibit K

SYNTHETIC FUELS STUDY PANEL

Dr. Randall Holcombe
Auburn University

Dr. Eric Leber
American Public Power Association

Dr. Glenn Loury
University of Michigan

Mr. Robert McClements
Sun Company

Dr. John McKetta
University of Texas

Dr. H. A. Merklein
University of Dallas

Mr. Amos J. Meyer
Chase Manhattan Bank

Dr. Thomas G. Moore
Hoover Institution
Stanford University

Dr. Richard Stroup
Montana State University

Dr. Richard Wainerdi
3D International

*Dr. Kurt J. Irgolic, rapporteur
Texas A & M University

Exhibit L

United States Synthetic Fuels Corporation
1900 L Street, N.W. Washington, District of Columbia 20586 Telephone (202) 653-4400

January 8, 1982

Dr. Richard Stroup
403 N. 20th
Bozeman, Montana 59715

Dear Dr. Stroup:

I want to thank you for agreeing to participate in the Synthetic Fuels Review Panel. I'm pleased you will be a part of our effort to provide the Corporation's Board with the best and most complete information available as it makes its decisions. The Review Panel will meet at the Mayflower Hotel in Washington, D.C., from January 22 through January 25, 1982. We will also have a small reception on the evening of January 21 to introduce the Panel members to each other and to some of our senior staff.

The purpose of the Panel is to get input from people of your stature and capacity on the broadest possible range of ideas and experience concerning synthetic fuels issues and then to make these discussions available to the Board in a report. Certainly your deliberations should be unrestrained and wide-ranging. We feel the greatest contribution the Panel can make may be in areas we're not considering. At the same time, however, actual experience during the past few months has raised some questions which may be especially appropriate for the Panel's consideration and it is in this context that the following are offered:

1. How should the strategic policy issues in our statute be resolved? (Considerations for diversity of technologies and resources, of geographical distribution of resources, production potentials, replication potential, economic viability, etc.)

2. If a technology isn't being developed, does this signal a need for Corporation involvement or does it indicate that the economics and/or the technology isn't feasible?

3. Scientifically and economically, how can "commercial" be defined? What is an optimum-size project? What is the practicability, economic and scientific, of project size?

4. How much domestic oil and natural gas do we really have, and how quickly is it apt to be developed/used?

5. What Corporation processes would be most productive in preparing our 1984 comprehensive strategy report to Congress? What is the economic reliability of projections for that report?

6. What levels of risk should be taken to get a synthetic fuels program underway? What is an acceptable risk level of project failure?

7. What is your assessment of the technical, scientific, and economic probability of establishing a commercial synfuels industry?

8. How can we maximize the Corporation's effectiveness in project selection, execution, etc.?

9. What are the Corporation's effects on capital markets? What should a project sponsor's net capital requirement be? His equity requirements?

10. What is "acid rain" and what are its effects? What is the "greenhouse" effect? How significant are these issues?

11. Discuss the socioeconomic effects of synfuel development. Include scenarios and multiplier effects for support industries, labor influx, etc.

12. What do we know about toxic wastes from synfuel development?

13. What role does water use play in synfuel development?

14. What is your assessment of the technological maturity of synfuel technologies? How do they compare?

15. What production scenarios are likely for synthetic fuels? Discuss quantities and types of products.

16. What are world price and production forecasts for oil and natural gas?

As presently planned, the entire Review Panel will meet initially, choose a chairman, and decide on a timetable and agenda. The Panel will then divide into an economics/finance panel and a scientific/technological panel for in-depth discussions and deliberations. Each smaller panel will select a chairman and produce a draft report to be shared and commented on by the full Review Panel, which will then reconvene and prepare a single report for presentation to the Corporation's Board of Directors. Members of the Corporation's Planning staff will be available to assist you in this, as will Dr. Kurt Irgolic of Texas A&M University.

I am looking forward to seeing you on the 21st, and in preparation for your meeting and discussion I have sent under separate cover some background materials for your review. These have been provided previously to the Board of Directors. We appreciate your participation and thank you in advance for your time and the contribution we feel your input will be to the Synthetic Fuels Corporation and your country.

Sincerely,

Edward E. Noble
Chairman

EEN/jrp

United States Synthetic Fuels Corporation
1900 L Street, N.W. Washington, District of Columbia 20586 Telephone (202) 653-4400

December 21, 1981

Dr. Eric Leber
American Public Power Association
2301 M Street, N.W.
3rd Floor
Washington, D.C. 20037

Dear Dr. Leber:

When I first decided to accept the position of Chairman of the Synthetic Fuels Corporation, one of the major factors influencing my decision was the chance to insure that the SFC's multi-billion dollar budget was employed in as useful, and judicious a fashion as possible. To do this, however, it is essential that as much qualified information as possible be available when decisions regarding projects are made. In order to insure that this takes place, I have decided to establish a Synthetic Fuels Review Panel.

The panel will consist of ten outstanding experts, five of whom will be chosen from scientific and technical disciplines, and five of whom will have expertise in economics or finance. The purpose of the panel is to stimulate the broadest possible exchange of ideas and experience and to produce a report for myself, and others here at the SFC.

After careful consideration, you have been selected for participation in this effort. Current plans call for the Synthetic Fuels Review Panel to meet January 22 through January 25, 1982, in Washington, D.C.

As a recognized expert in your field, your participation would be invaluable. I hope that your busy schedule allows you to be a part of this panel. Travel and expenses will be paid, of course, and a small honorarium will be provided.

My staff will be in contact with you soon to provide additional information. I look forward to seeing you on January 22.

Sincerely,

Edward E. Noble
Chairman

United States Synthetic Fuels Corporation
1900 L Street, N.W. Washington, District of Columbia 20586 Telephone: (202) 653-4400

February 2, 1982

Mr. Amos J. Meyer
Chase Manhattan Bank-Energy/Economics
1 Chase Manhattan Plaza
New York, New York 10081

Dear Mr. Meyer:

Thank you for your patience as we reschedule the meeting of the Synthetic Fuels Study Panel, of which you are a member. We cannot promise better weather in Washington for our next try, but we can surely hope it will not be as confounding as that of January 21st.

I have been working closely with the Chairman to coordinate the work of the Panel with that of the Corporation. We will update and streamline the Panel's agenda and format in view of what the Corporation will have accomplished by the time the Panel meets. Our intention is to ensure that the Corporation will have the benefit of your expertise on issues that will be of current and future importance.

Finding dates that will work for all of you, as well as the senior staff here, necessarily takes time. However, we are attempting to have the Panel meet at least within the next sixty days. To assist our rescheduling, it would be helpful to have an indication of any time blocks during which you are not available through mid-April or so. I would appreciate receiving such a note from you at your earliest convenience.

I look forward to meeting and working with you soon.

Sincerely,

Darrel W. Lundquist
Director of Planning

cc: Ed Noble

Exhibit M

US Synthetic Fuels Corporation Annual Report 1981

Project Descriptions and Status Reports

The following 11 projects were chosen by the Board of Directors to undergo project strength evaluations by the staff. Recommendations on each will be made to the Board in February 1982.

The *Coolwater* project will produce medium Btu gas using a Texaco gasifier. The gas is then used to produce electricity using an integrated combined cycle. Construction of the plant began in December 1981. The plant, in Daggett, California, has an initial capacity of 4,300 barrels per day of oil equivalent in 1984, with additional capacity to 7,036 barrels by 1988. The project is sponsored by Texaco, Southern California Edison Company, Electric Power Research Institute, Inc., Bechtel Power Corporation, General Electric Company, JCWP, and the Empire State Electric Energy Research Company. The sponsors are seeking price guarantees.

The *Memphis* project will produce medium Btu industrial fuel gas using the U-gas gasifier. Located in Memphis, Tennessee, the project is scheduled for construction start-up in the fourth quarter of 1982. Plant capacity will be 8,400 barrels per day of oil equivalent, beginning in 1984. The project is sponsored by the Memphis Light, Gas and Water utility, which is requesting both loan and price guarantees.

The *WyCoal* project will produce synthetic natural gas from coal in Douglas, Wyoming. The conversion process consists of Lurgi fixed-bed gasification, followed by gas clean-up, shifting, acid removal, and finally methane synthesis. Start of construction is scheduled for April 1983. The plant's initial capacity will be 13,500 barrels per day of oil equivalent starting in 1986, with expansion to 27,000 barrels in 1988. The project is sponsored by WyCoal Gas, Inc., a Panhandle Eastern Company. Both loan and price guarantees are sought.

The *Breckinridge* project will produce a full complement of refinery feedstocks using the H-Coal direct liquefaction process in Breckinridge County, Kentucky. Construction start-up is scheduled for the fourth quarter of 1983. Plant capacity will be 49,800 barrels per day of oil equivalent starting in 1989. The project sponsors are Ashland Synthetic Fuels, Inc. and Bechtel Petroleum, Inc. They are requesting a loan guarantee.

The *First Colony* project, located in Creswell, North Carolina, will produce methanol from peat using the KBW gasification process followed by the ICI synthesis process to covert the synthetic gas into methanol. Start of construction is scheduled for the fourth quarter of 1982. Plant capacity will be 1,900 barrels per day of oil equivalent starting in 1985. The project is sponsored by Peat Methanol Associates, made up of the Energy Transition Corporation, Koppers Company, and J. B. Sunderland. The sponsor is asking loan and price guarantees.

The *Hampshire* project will produce gasoline from coal in Campbell County, Wyoming. The process consists of gasifying coal in Lurgi and KBW gasifiers, followed by gas cleaning, shifting, acid gas removal, methanol synthesis and conversion of the methanol to gasoline by the Mobil MTG process. Start of construction is scheduled for mid-1983. Plant capacity will be 19,293 barrels per day of oil equivalent starting in 1987. The project sponsor, Hampshire, is a joint venture of Kaneb Services, Inc., Koppers Company, Northwestern Mutual Life Insurance Company, Metropolitan Life Insurance Company, and Standard Oil of Ohio. Loan and price guarantees are requested.

The *Northern Alabama* project will produce methanol from coal in Murphy Hill, Alabama. The process consists of gasifying coal in a Koppers-Totzek entrained bed gasifier, followed by shifting, acid gas removal and methanol synthesis. Start of construction is scheduled for the first quarter of 1983. Plant capacity will be 12,000 barrels per day of oil equivalent coming on line in late 1986. The project sponsors are Santa Fe International, Kidder Peabody, and Air Products and Chemicals. They are requesting both loan and price guarantees.

The *Tennessee Synfuels* project, located in Oak Ridge, will produce gasoline from coal. The processes to be used include KBW gasification followed by the ICI methanol synthesis process followed by the Mobil MTG gasoline process. Start of construction is scheduled for the third quarter of 1983. The plant's initial capacity will be 7,691 barrels per day of oil equivalent in 1985, with expansion to 50,000 barrels per day in 1988. The project sponsor is Tennessee Synfuels Associates, a joint venture of Koppers Synfuels Corpo-

ration and Citgo Synfuels, Inc. Loan and price guarantees are sought.

The *Paraho* project will produce shale crude using room and pillar mining followed by surface retorting using the Paraho process. Located in Uintah County, Utah, project construction is scheduled to begin in mid-1982. Initial capacity will be 10,000 barrels per day by 1984, with expansion to 30,000 barrels by mid-1985. The project is sponsored by the Paraho Development Corporation, which is requesting both loan and price guarantees.

The *Calsyn* project will use the Dynacracking process to upgrade heavy oil and bitumen from tar sands for refining in a conventional petroleum refinery. Construction is scheduled to begin 1–2 months after an award is received from the Corporation. The plant will be located in Pittsburg, California. Plant capacity is approximately 5,100 barrels per day starting in late 1983 or early 1984. The project sponsor is Calsyn, a joint venture of Tenneco Oil Company, CDC Oil and Gas, Ltd, Alberta Oil Sands Technology and Research Authority, and Dynalectron Corporation. The sponsor is requesting a loan guarantee.

The *CoaLiquid* project in Shelbyville, Kentucky will produce a coal-oil mixture using the CoaLiquid technology. The plant, which is fully constructed, is producing 1,000 barrels per day. The project is sponsored by CoaLiquid, Inc., which is asking for price guarantees.

PROPOSED FISCAL YEAR 1983 BUDGET REQUEST

TUESDAY, FEBRUARY 23, 1982

U.S. SENATE,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
Washington, D.C.

The committee met, pursuant to notice, at 9:35 a.m., in room 3110, Dirksen Office Building, Hon. James A. McClure, chairman, presiding.

Present: Senators McClure, Warner, Murkowski, Nickles, East, Heinz, Bumpers, Ford, Melcher, and Bradley.

Also present: Gary Ellsworth, counsel; Richard D. Grundy, professional staff member; D. Michael Harvey, chief counsel for the minority; and James T. Bruce, counsel for the minority.

OPENING STATEMENT OF HON. JAMES A. McCLURE, A U.S. SENATOR FROM THE STATE OF IDAHO

The CHAIRMAN. The committee will come to order. Good morning, ladies and gentlemen.

This hearing continues the committee's oversight hearings on the President's proposed fiscal year 1983 budget for various programs within the jurisdiction of this committee.

Today the hearings will focus on programs of the Department of Energy. Earlier this month testimony was received from Interior Secretary James Watt as well as the Forest Service and the Synthetic Fuels Corporation. During these hearings, the committee will be evaluating various budget proposals for fiscal year 1983 in preparation of the committee's March 15 report to the Senate Budget Committee.

Our goal must be Federal energy programs that support that same creativity and individual initiative of the American people that made our country great. As a nation, our capability to sustain economic growth requires Federal energy policies that support sound economic decisions by the private sector.

Our witness this morning on behalf of the Department of Energy is Secretary James Edwards. It is a pleasure to have you back before our committee today, and I appreciate the cooperation which you have given to me and to other members of the committee over the past year, and in particular in trying to present to us a budget document that carries forward the President's commitment to the reorganization of Government activities in the Department of Energy, but still putting it in the context of the existing organization so that we can make substantive and I hope informed decisions with respect to our March 15 deadline for submission to the Budget committee.

Mr. Secretary, your statement has been received. It will be placed in the record in full. You may proceed to give that statement, summarize it, hit the high points, or extemporize in whatever way you wish at this time.

STATEMENT OF HON. JAMES B. EDWARDS, SECRETARY, DEPARTMENT OF ENERGY

Secretary **Edwards**. Thank you, Mr. Chairman. If you would permit me, I will submit the written statement for the record; but I would like to address a few highlights of that statement.

Mr. Chairman, members of the committee, I appreciate the opportunity to discuss with you the fiscal year 1983 budget for Federal energy programs. This budget is structured to carry out this administration's policy of relying on the free market for solutions to energy problems. The free market has served us well in the past and will work well in the future if it is allowed the freedom to do so.

Our fiscal year 1983 budget request follows the pattern established in last year's request to redirect Federal support away from demonstration and commercialization activities in favor of the more appropriate Federal role of funding long-term, high-risk technology research and development with the potentially high payoff.

This redirection in spending and the removal of over 200 Federal regulations are the key to our policy of placing more reliance on the private sector and the marketplace. This policy is working. Since the decontrol of oil last year, drilling and seismic work have reached alltime peaks, and oil imports are at the lowest level since 1975.

The fiscal year 1983 budget request supports the five basic responsibilities in energy which are unique to the Federal Government:

One is establishing policies which give individuals and businesses the incentive to produce and use energy efficiently and allow an integrated energy market to function;

Two, protecting against energy supply disruptions, primarily through maintenance of the strategic petroleum reserve;

Three, providing support to long-term, high-risk, potentially high-payoff research;

Four, supporting national defense needs through civilian control of research, development, production, and testing of nuclear weapons; and

Five, performing other tasks such as operation of the Naval Petroleum and Oil Shale Reserves and the Federal Power Marketing Administrations, and utility regulation required by law.

As stated in the national energy policy plan of July 1981, energy is viewed not as an isolated entity, but as an integral part of the overall economy. Consequently, a single-purpose, Cabinet-level department is no longer necessary. Our basic energy responsibilities can be carried out more efficiently and effectively in other Cabinet-level departments with related responsibilities.

In the proposed reorganization plan, these responsibilities will be divided principally between the Department of the Interior and the Department of Commerce. The Departments of Justice and Agriculture will also assume some functions; and the Federal Energy Regulatory Commission will become a separate, independent regulatory agency.

A new agency, the Energy Research and Technology Administration [ERTA], will be established within the Department of Commerce to manage energy research and development, uranium enrichment, general science, and defense activities.

Other energy functions such as energy information, emergency preparedness, international energy, conservation grants management, and national energy policy, will also be assigned to Commerce, but they will not be a part of ERTA.

The Department of the Interior will manage the Naval Petroleum and Oil Shale Reserves and the five Power Marketing Administrations.

Speaking of the budget summary, the fiscal year 1983 budget request for Federal energy programs is $11.8 billion in budget authority, including $2.1 billion of off-budget oil acquisition funds for the strategic petroleum reserve.

The requested funding is reduced in energy research and development, the strategic petroleum reserve, and program administration. Other major activities have increased funding requirements, including atomic energy defense activities, general science, and the power marketing administrations.

R. & D. activities represent 27 percent of the fiscal year 1983 budget and show a 14-percent decline from fiscal year 1982, due primarily to continued redirection of fossil, conservation, solar, and renewable programs.

Magnetic fusion is a good example of a long-term research effort with potentially high payoff. The fiscal year 1983 budget request of $444.1 million will provide for continuation of our scientifically oriented fusion program, with a limited engineering effort.

The nuclear fission program provides the research base for the continued development of nuclear power as an economic and environmentally acceptable source of electric power. The fiscal year 1983 budget request is about $1 billion, including $577.5 million for the breeder reactor systems program, which will allow us to move forward with the Clinch River breeder reactor.

We propose that a nuclear waste disposal fund be created from fees to be paid by utilities which use nuclear power. Borrowing authority of $185 million is requested to provide program continuity early in the year until fees are collected from utilities.

The purpose of the basic energy sciences program is to provide knowledge that is relevant to energy production, conversion, exploration, and use. In fiscal year 1983, the budget request of $283 million will enable the program to maintain most of the ongoing core research programs and will permit some growth in biological energy research, advanced energy projects, engineering, mathematics, and geosciences.

The fiscal year 1983 fossil energy budget request of $107 million will be applied to generic research efforts and technology base development related to production and use of our abundant resources of coal, oil shale, and petroleum.

The fiscal year 1983 request of $17.5 million for conservation programs will support research and development in multisector energy conversion and utilization technology programs. State and local assistance programs, including grants for weatherization and schools and hospitals, are proposed to be terminated, together with support for appropriate technology of energy-related activities. Funds for weatherization will still be available through the Departments of Health and Human Services and Housing and Urban Development.

The fiscal year 1983 funding request of $83 million for solar and other renewable programs continues the redirection of programs begun last year to place greater emphasis on the private sector in the development and commercialization of solar technologies.

No new budget authority is requested for active heating and cooling, passive heating and cooling, ocean thermal energy systems, hydropower, and solar information programs.

Basic research and technology-based development will continue in photovoltaics, solar thermal, biomass, wind energy, and geothermal programs, and we will complete our commitment to Saudi Arabia for jointly funded solar energy research and development projects there.

The programs included in the general science appropriation support basic research to expand our knowledge of the fundamental structure and behavior of matter. The budget request for fiscal year 1983 is $601 million, up from $543 million in fiscal year 1982.

Defense activities support the national security mission of the Department of Defense through the development, testing, and production of nuclear weapons and materials. The increase in funding from $4.7 billion in fiscal year 1982 to $5.5 billion in 1983 is principally related to increased production requirements of weapons systems as outlined in the President's nuclear weapons stockpile memorandum.

The Defense waste management program also shows a substantial increase from $365 million in fiscal year 1982 to $518 million in fiscal year 1983, with the largest increase in terminal storage to improve our current and future storage capacity.

The total funding request for 1983 is $2,326 million for the strategic petroleum reserve. Of this about $2.1 billion is off budget for oil acquisition and transportation. The total available capacity of the reserve will be filled at the end of fiscal year 1983 to a cumulative capacity of 343.1 million barrels. New authority of $222.5 million is requested in fiscal year 1983 for facilities development.

Energy regulation—the fiscal year 1983 FERC budget request is $92.5 million, to be partially offset by $60 million from fees and other charges, assuming favorable consideration by the Congress of the FERC user fee legislation.

Under the reorganization plan, regulation activities, other than FERC, will be assigned to the Department of Justice. The Department of Justice will carry out adjudicatory activities to identify and obtain redress for violations which occurred during the period of price and allocation controls. The budget request for the Department of Justice's energy regulatory activities is $18 million, which will be adequate to support a vigorous enforcement effort. These cases will be prosecuted fully.

The departmental administration fiscal year 1983 budget request of $162 million reflects the reduced requirements resulting from a decline in the number of Federal employees and the reduction of overhead anticipated with the merger of the Departments of Energy and Commerce.

Mr. Chairman, I believe the fiscal year 1983 budget request for Federal energy programs will permit us to carry out those essential energy tasks which are unique to the Federal Government, while leaving the remaining energy responsibilities to the genius and energies of the American people.

Mr. Chairman, it is a pleasure to make these points in reference to the Department of Energy. I will be happy to answer any questions you may have at this time

[The prepared statement and attachments submitted by Secretary Edwards follow. Testimony continues on p. 667.]

STATEMENT OF
JAMES B. EDWARDS
FY 1983 BUDGET

Mr. Chairman, Members of the Committee, I appreciate the opportunity to discuss with you the Fiscal Year 1983 budget for Federal Energy programs.

This budget is structured to accord with the proposed reorganization of energy functions currently administered by the Department of Energy. The objective of this budget and reorganization is to continue the transition from an energy policy which has led to a costly, ever-expanding energy bureaucracy, to a policy which relies on the free market for solutions to many of our energy problems. We believe the free market has served us well in the past and will work in the future when it is allowed the freedom to do so.

Last year, our budget request focused on redirecting Federal support away from demonstration and commercialization activities that are better handled by the private sector in favor of the more traditional and appropriate Federal role of funding longer-term, high-risk technology research and development with a potentially high payoff. That trend is continued and further refined in the FY 1983 budget request. This realignment of budget priorities was accompanied by a major step toward freeing the marketplace with the President's action of January, 1981, removing all price and allocation controls from crude oil and petroleum products.

Our redirection in spending and the removal of over 200 burdensome, counterproductive regulations are the keys to this Administration's policy of placing more reliance on the private sector and the market to stimulate energy conservation, production, and the selection of new technologies for commercialization.

This policy is working well. Since the decontrol of oil last year, drilling and seismic work have reached all time peaks, and this year we expect to break those records. Oil imports are at the lowest level since 1975, a vibrant sign that conservation is working.

The FY 1983 budget request for energy programs has been developed to support the five basic responsibilities in energy which are unique to the Federal government:

- Establishing sound public policies which give individuals and business the incentive to produce and use energy efficiently and allow an integrated energy market to function;
- Protecting against energy supply disruptions, primarily through maintenance of the Strategic Petroleum Reserve;
- Providing support to long-term, high-risk, potentially high-payoff research;

- Supporting national defense needs through civilian control of research, development, production, and testing of nuclear weapons; and
- Performing other tasks, such as operation of Federal energy resource reserves and Federal Power Marketing Administrations, and utility regulation required by law.

There being no further role for the government in the petroleum marketplace and in the commercialization of energy technologies, it is no longer necessary to have a single-purpose Cabinet-level department for the management of energy matters. As was stated in the National Energy Policy Plan released in July, 1981, energy is no longer viewed as an isolated entity, but rather as an integral part of the overall economy. Consequently, the management of these five basic energy responsibilities can be carried out more efficiently and effectively in other Cabinet-level departments which are charged with major responsibilities in the management of the Nation's economy.

In the proposed reorganization plan, these responsibilities will be divided principally between the Department of Commerce and the Department of the Interior. Completion of petroleum regulatory enforcement and related activities will go to the Department of Justice, and the Federal Energy Regulatory Commission will become a separate, independent regulatory agency. The Department of Commerce will receive the bulk of the energy programs currently managed by the Department of Energy. A new agency, the Energy Research and Technology Administration (ERTA), will be established within the Department of Commerce to manage energy research and development, uranium enrichment, general science and defense activities. I am convinced that our security can be enhanced, our trade promoted, and our energy technologies advanced by combining these energy programs with the existing trade enhancement and technology development activities in the Department of Commerce.

The creation of ERTA will allow specialized management of the high technology energy, science, and weapons programs than was possible in the Department of Energy. This streamlined new organization will be able to focus necessary management attention on the difficult and unique set of problems that face high technology program development, and efficiency gains will result from the interrelationships of these programs.

Independent of ERTA, the Department of Commerce will also administer other energy functions, such as energy information collection and analysis, emergency preparedness activities, international energy activities, conservation grant management, and national energy policy. The Department of Commerce is particularly well suited to manage these programs because of its current information collection and statistical functions, its existing relationships with the business community and with State and local governments, and its national and international economic policy functions.

The Department of the Interior will manage Federally owned energy resources including the Strategic Petroleum Reserve, the Naval Petroleum and Oil Shale Reserves, and the five Power Marketing Administrations. The Department of the Interior's expertise in natural resource management makes it the logical recipient of these programs. In addition, certain mining research and development and related activities will transfer to the Department of the Interior's Bureau of the Mines.

BUDGET SUMMARY

The FY 1983 budget request for Federal energy programs is $11.8 billion in budget authority, including $2.1 billion in off-budget oil acquisition funds for the Strategic Petroleum Reserve. The anticipated outlays are $12.2 billion. This is a decrease of $1.3 billion in budget authority from FY 1982. Areas where requested funding is reduced include Energy Research and Development, the Strategic Petroleum Reserve, and Program Administration. Other major activities have increased funding requirements, including Atomic Energy Defense Activities, General Science, and the Power Marketing Administrations.

I would like now to discuss the funding request for selected major program elements.

RESEARCH AND DEVELOPMENT PROGRAMS

As mentioned above, the proposed reorganization plan transfers research and development programs to the Energy Research and Technology Administration (ERTA).

These activities, which represent 27 percent of the overall budget in FY 1983, show a 14 percent reduction from FY 1982. This reduction is a continuation of the redirection begun last year of the fossil, conservation, solar and renewable resource programs away from expensive technology demonstrations in favor of long-term, high-risk, potentially high-payoff research and development.

I will discuss certain of these technologies in greater detail.

MAGNETIC FUSION

Our efforts in fusion energy are directed toward a breakthrough that would provide us with a potentially inexhaustible energy resource base. The FY 1983 budget request of $444.1 million will provide for continuation of our scientifically oriented fusion program with a limited engineering effort. The plasma confinement effort will be aimed at pursuing mainline tokamak and mirror concepts. The Tandem Mirror Experiment Upgrade at Lawrence Livermore Laboratory will be operating and construction of the Tokamak Fusion Test Reactor project at the Princeton Plasma Physics Laboratory will be completed.

Funds are also proposed to fabricate an Advanced Toroidal Facility at Oak Ridge National Laboratory and improve the capability of the existing Doublet III machine to provide the research tools necessary to address the physics issues in present and advanced toroidal concepts. Furding is also proposed to continue construction activities on the Mirror Fusion Test Facility-B at Livermore.

NUCLEAR FISSION

The Nuclear Fission program provides the research base for the continued development of nuclear power as an economic and environmentally acceptable source of electric power. The FY 1983 budget request is $1,016 million.

The FY 1983 budget request for the Breeder Reactor Systems program is $577.5 million. In mid-FY 1982, in support of the President's Economic Recovery Program, we will begin to streamline certain aspects of the Liquid Metal Fast Breeder Reactor (LMFBR) program. This is necessary so that the resources, facilities, and technical expertise can be used in the most cost-effective manner. The breeder base program will continue to support technology development on fuels, materials, and structures.

The principal plant project included in the LMFBR program is the Clinch River Breeder Reactor (CRBR). In FY 1983, it is anticipated that site preparation activities will move forward as well as the required licensing support, design work, and equipment procurement and fabrication activities.

Emphasis is also placed on closing the nuclear fuel cycle, principally by continuing research on commercial reprocessing of spent fuel, and on nuclear waste disposal. The Administration is committed to the development of commercial high-level waste repositories. To finance repository activities, we propose that a Nuclear Waste Disposal Fund be created into which fees will be paid by utilities which use nuclear power to generate electricity. In FY 1983, borrowing authority of $185 million is requested to provide program continuity early in the year, until fees are collected from the utilities later in the year. It is estimated that $300 million in fees will be deposited in the fund in FY 1983.

BASIC ENERGY SCIENCES

The purpose of the Basic Energy Sciences (BES) program is to provide knowledge that is relevant to energy production, conversion, exploration and use.

In FY 1983, the budget request of $283 million will enable the program to maintain most of the ongoing core research program and will permit some growth in biological energy research, advanced energy projects, engineering, mathematics, and geosciences. In addition, the BES program will continue to operate a network of research facilities at the National Laboratories as a national trust.

In FY 1983, the BES program will support research using major facilities such as the National Synchrotron Light Source at Brookhaven National Lab, and the Combustion Research Facility at Sandia Laboratories. Funding is also provided for modifications of the Weapons Neutron Research Facility at the Los Alamos Scientific Laboratory, which will be the first in a new generation of neutron sources for civilian research. In FY 1983, this program will assume the responsibility for operation of the Stanford Synchrotron Radiation Laboratory, formerly funded by the National Science Foundation.

FOSSIL ENERGY

This Nation still has abundant domestic resources of coal, oil shale, natural gas and petroleum. As a result of the Administration's action last year to decontrol the price of oil, government subsidies and regulations which reduced production and encouraged oil imports have been abandoned, and free market forces have greatly increased the attractiveness of domestic energy investments.

The Fossil Energy budget request reflects this changing role of the Federal government. The process began last year, when the Fossil Energy budget was realigned to concentrate on long-term, high-risk research and development, while relying on the private sector to demonstrate and commercialize promising individual technologies and processes. In FY 1983, funds will be applied to more generic research efforts and technology base development.

The budget request for these activities is $107 million. Of this figure, $91 million is for the Coal program. Almost 50 percent of the budget request for Coal is devoted to the Advanced Research and Technology Development and Coal Liquefaction programs, with lesser amounts earmarked for work in the areas of coal gasification, fuel cells, environmental control technology and coal preparation, direct combustion, and mining research and development.

In the Petroleum program, the FY 1983 effort will concentrate on enhanced recovery of light and heavy oil, and chemistry and physics work and environmental mitigation efforts in oil shale. In addition, the advanced exploratory research activities, which provide generic and fundamental support to all petroleum programs, will continue. The budget for petroleum activities is $16 million.

CONSERVATION

Efficient energy use is in everyone's economic interest. Rapid increases in energy costs have fostered substantial conservation efforts by individuals, businesses and other institutions in the past few years. The President's action to immediately deregulate crude oil and petroleum product prices in January 1981 has done much to free the market and accelerate this process. Consequently, a major Federal conservation program is no longer necessary.

Conservation Research activities will concentrate on fundamental research designed to build a technology base that can provide the foundation for future development of commercial products by the private sector.

In FY 1983, research and development funding of $17.5 million will be concentrated in the Multi-Sector Energy Conversion and Utilization Technology program area. The results of research performed there will be made available directly to the private sector, rather than being utilized by government technology applications programs serving specific end-use sectors, as was the case previously. The market forces which are behind the impressive nationwide conservation efforts render these intermediate technology application activities unnecessary beyond FY 1982.

The State and local assistance programs, which include grants for Weatherization and Schools and Hospitals, are proposed to be terminated, together with support for appropriate technology and energy-related inventions. The budget request of $4.3 million will fund the personnel required for monitoring and termination of activities relating to final grants awarded in the previous year. This activity will be housed in the Department of Commerce, but not within ERTA. The FY 1983 Budget would still provide Federal funds to the States for weatherization through the Low-Income Home Energy Assistance Program administered by the Department of Health and Human Services and through the Community Development Block Grant Program administered by the Department of Housing and Urban Development. Continued Federal support for the appropriate technology and energy-related inventions programs can no longer be justified in an economic climate so conducive to private support for energy conservation.

SOLAR AND OTHER RENEWABLE ENERGY

Solar and Other Renewable Energy resources offer the potential for significant contributions toward achieving energy self-sufficiency over the long term. The FY 1983 funding request for these programs totals $83 million.

The Administration's policies for solar energy continue the redirection begun last year to place greater emphasis on the private sector in the development and commercialization of solar technologies. The free market will determine the development and introduction rates of solar technologies consistent with their economic potential. A number of new technologies have been developed in recent years, and it is time that they be tested in the marketplace.

Consistent with this policy, no new FY 1983 budget authority is being requested for Active Heating and Cooling, Passive Heating and Cooling, Ocean Thermal Energy Systems, Hydropower, and Solar Information programs.

The Photovoltaics program budget request of $27 million is directed toward advancing the technology base upon which private industry can develop photovoltaic energy systems. Basic research activities will continue in the Solar Thermal, Biomass, and Wind Energy program areas, and the request of $9.5 million for Solar International activities will complete our Government's commitment to the Saudi Arabian Government under the Cooperative Project Agreement for jointly funded solar energy research and development.

The overall strategy of the Geothermal program is to conduct generic and technology base research. Consistent with this strategy, the $10 million FY 1983 geothermal program is structured around three areas: orderly termination of the hot dry rock program, completion of government involvement in the geopressurized resource definition program, and performance of research and development in the areas of geochemistry, geoscience, and energy conversion with particular application to lower-temperature resources.

GENERAL SCIENCE

The programs included in the General Science appropriation support basic research to expand our knowledge of the fundamental structure and behavior of matter. The budget request for FY 1983 is $601 million, up from $543 million in FY 1982.

The High Energy Physics Program shows the largest increase. The FY 1983 budget request of $429 million is almost 18 percent above the previous year's funding. One of the major activities in FY 1983 will be the commissioning and initial operations for research of the Energy Saver Superconducting Synchrotron at Fermi National Accelerator Laboratory. Priority is also given to operation of the Positron Electron Project Colliding Beam Facility at the Stanford Linear Accelerator Center. There will be a significant accelerator R&D program at Brooknaven National Laboratory on superconducting magnets, which are a high priority need for the future of the U.S. High Energy Physics Program.

DEFENSE ACTIVITIES

Defense Activities support the national security mission of the Department of Defense through the development, testing, and production of nuclear weapons and materials. The increase in funding from $4,692 million in FY 1982 to $5,506 million in FY 1983 is principally related to increased production requirements of weapons systems as outlined in the President's Nuclear Weapons Stockpile Memorandum.

Funding for full scale production of eight types of weapons will be requested, and weapon research and development efforts will also increase. Materials Production funding shows an increase commensurate with production requirements and the continuation of capital improvement projects.

The Defense Waste Management program also shows a substantial increase, from $365 million in FY 1982 to $518 million in FY 1983, with the largest increase in Terminal Storage to improve our current and future storage capacity. The Waste Isolation Pilot Plant project and the Defense Waste Processing facility - a glassification project - will be continued in FY 1983.

STRATEGIC PETROLEUM RESERVE

The total funding request for FY 1983 is $2,316 million, $2,074 million of which is off-budget for oil acquisition and transportation. As a result of limitations on available permanent storage capacity and, further, as a result of revised oil price assumptions, this funding level is well below FY 1982's $3,875 million, which included $3,684 million off-budget for oil acquisition and transportation. The total available capacity of the Reserve will be filled by the end of FY 1983 to a cumulative capacity of 343.1 million barrels.

New authority of $222.5 million is requested in FY 1983 for facilities development. As a result of accelerated leaching of the Bryan Mound caverns and other factors, storage capacity in the near term is being developed faster than previously anticipated. However, deferral of $53 million in FY 1982 funds is being proposed as part of a one year stretch-out of the completion of the 750 million barrel system. This will have no effect on available storage capacity prior to 1987.

ENERGY REGULATION

Energy regulatory activities include the work of the Federal Energy Regulatory Commission (FERC), which becomes a separate, independent agency under the proposed reorganization plan, and the duties currently being performed by the Economic Regulatory Administration (ERA) and the Office of Hearings and Appeals (OHA).

In FY 1983, the FERC budget request is $92.5 million, to be partially offset by approximately $60 million from fees and other charges, assuming favorable consideration of the FERC user fee legislation by the Congress. The duties of the ERA and OHA will be divided between the Departments of Justice and Commerce under the reorganization plan. The Department of Justice will carry out the greater part of the adjudicatory activities of the OHA, as well as the petroleum regulatory compliance program, which seeks to identify and obtain redress for violations which occurred during the period when price and allocation controls were in effect on crude oil, residual oil and refined petroleum products. The budget request for the Department of Justice's energy regulatory activities is $18 million. We believe this funding level will be adequate to support a vigorous enforcement effort. As has been said many times before, there will be no amnesty for those who have obtained unlawful benefits.

The Department of Commerce and the Federal Energy Regulatory Commission will exercise the remaining responsibilities of the OHA and the oil and gas operations program currently housed in ERA.

DEPARTMENTAL ADMINISTRATION

Funding requirements for Departmental Administration overhead activities are reduced in FY 1983, due largely to a decline in the number of Federal employees resulting from the elimination of unnecessary energy activities and the reduction of overhead anticipated with the elimination of the Department of Energy as a cabinet level organization.

Also, certain policy and management personnel once budgeted for in Departmental Administration are now proposed in the budgets of the operating activities they support. The budget request for FY 1983 is $162 million, compared to $267 million in FY 1982.

Mr. Chairman, I believe the FY 1983 budget request for Federal energy programs will permit us to carry out those essential energy tasks which are unique to the Federal Government, while leaving the remaining energy responsibilities to the genius and energies of the American people.

N O T I C E

There Should Be No Release
of This Document Until
12 p.m. Noon (E.S.T.)
Monday, February 8, 1982

FY 1983 Budget

Summary

FY 1983 BUDGET

Highlights

Department of Commerce

The Department of Commerce will receive the bulk of DOE programs.

- A new agency (Energy Research and Technology Administration) will be established within Commerce to manage:
  - Energy Research and Development
  - Uranium Enrichment
  - General Science
  - Defense Activities
- The Energy Information Administration, Emergency Preparedness Activities and Conservation Grant Management will also be Transferred to Commerce.

FY 1983 BUDGET

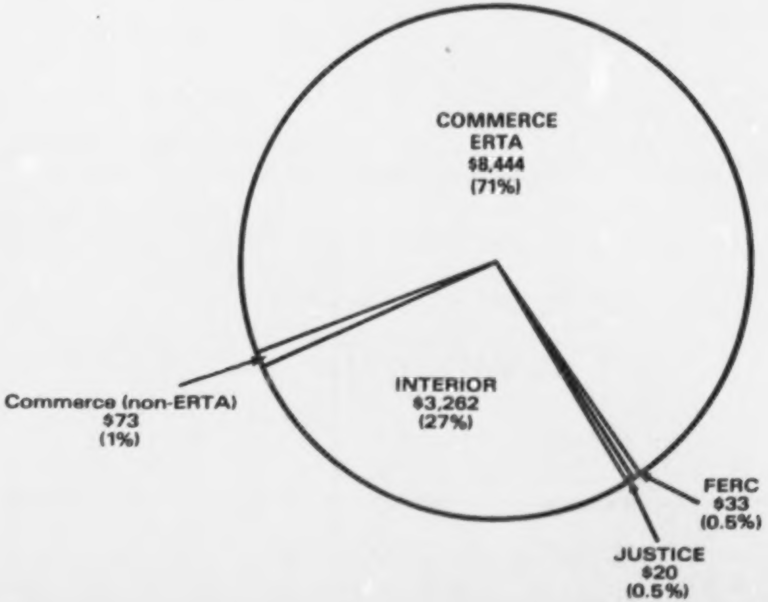
HIGHLIGHTS

DEPARTMENT OF JUSTICE

- THE COMPLIANCE PROGRAM FROM THE ECONOMIC REGULATORY ADMINISTRATION IS TRANSFERRED TO JUSTICE.
- THE COMPLIANCE RELATED ACTIVITIES OF THE OFFICE OF HEARINGS AND APPEALS ARE TRANSFERRED TO JUSTICE.

FY 1983 BUDGET

Breakout By Receiving Organizations
Budget Authority (in millions)



FY 1983 BUDGET

Overview

	Budget Authority 1981	Budget Authority 1982	Budget Authority 1983
	($ in Millions)		
Budget Authority:			
Total Programs	$ 12,668	$ 13,151	$ 11,832
Less: Off Budget Strategic Petroleum Reserves	—	−3,684	−2,074
Net Budget Authority	$ 12,668	$ 9,467	$ 9,758
Budget Outlays:			
Total Programs	$ 13,546	$ 13,277	$ 12,176
Less: Off Budget Strategic Petroleum Reserves	—	−2,834	−2,774
Net Budget Outlays	$ 13,546	$ 10,443	$ 9,402

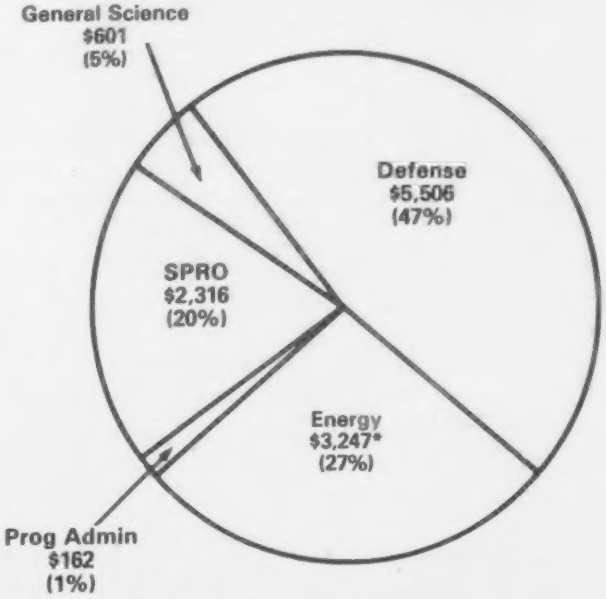
FY 1983 BUDGET

Summary

	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Energy:			
Research and Development Programs	$ 3,727	$ 2,822	$ 2,184
Uranium Enrichment	−23	−25	—
Strategic Petroleum Reserve	3,333	3,875	2,316
Other Non-R&D Energy Programs	1,150	978	1,063
Subtotal	8,187	7,650	5,563
General Science	517	543	601
Defense Activities	3,690	4,691	5,506
Administration	274	267	162
Total Programs	$ 12,668	$ 13,151	$ 11,832

FY 1983 BUDGET

Breakout By Primary Mission
Budget Authority (in millions)



*Includes $2074 million SPRO off-budget oil purchases.

FY 1983 BUDGET

Summary

	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Department of Commerce			
Energy Research and Technology Administration	$ 8,153	$ 8,271	$ 8,444
Non-Research and Development Activities	638	178	73
Subtotal	8,791	8,449	8,517
Department of the Interior	3,720	4,614	3,262
Department of Justice	80	11[1]	20
Federal Energy Regulatory Commission	77	77	33[2]
Total	$ 12,668	$ 13,151	$ 11,832

[1] Plus $32 million in Reappropriation

[2] Plus $60 million in Revenues

FY 1983 BUDGET

Department of Commerce	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Energy Research and Technology Administration			
Research and Development Programs			
Magnetic Fusion	$ 394	$ 454	$ 444
Nuclear Fission	1,051	1,089	1,016
Environment	230	224	169
Supporting Research and Technical Analysis	316	334	347
Fossil Energy	994	566	107
Conservation Solar and Other Renewables	1,048	518	101
Subtotal	$ 4,033	$ 3,185	$ 2,184
Uranium Enrichment	−23	−25	—
General Science	517	548	601
Defense Activities	3,690	4,691	5,506
Alternative Fuels Production	−300	—	—
Program Administration	242	240	153
Less Use of Prior Year Deferrals and Transfers	−6	−368	—
Subtotal Energy Research and Technology Administration	$ 8,153	$ 8,271	$ 8,444
Non-R&D Energy Activities			
Energy Conservation Grants	$ 430	$ 240	$ 4
Emergency Preparedness and Energy Regulation and Energy Information	180	100	64
Administrative Support	28	23	5
Less Reappropriation and Transfers	—	−185	—
Subtotal	$ 638	$ 178	$ 73
Total Department of Commerce	$ 8,791	$ 8,449	$ 8,517

FY 1983 BUDGET

Magnetic Fusion	Budget Authority 1981	1982	1983
	($ in Millions)		
Applied Plasma Physics	$ 72	$ 74	$ 77
Confinement Systems	120	156	203
Development and Technology	74	80	84
Center for Magnetic Fusion Engineering	4	9	0
Planning and Projects	121	131	76
Program Direction	3	4	4
Subtotal	394	454	444
Less Use of FY 1981 Deferrals	—	−19	—
Total Magnetic Fusion	$ 394	$ 435	$ 444

FY 1983 BUDGET

Nuclear Fission

	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Commercial Nuclear Waste	$ 189	$ 210	$ 80
Commercial Nuclear Waste Disposal Fund	—	—	185
Advanced Nuclear Systems	40	38	31
Converter Reactor Systems	83	96	32
Nuclear Fuel Cycle	83	53	59
Breeder Reactor Systems	611	647	577
Remedial Action	43	43	50
Policy and Management	2	2	2
Subtotal	1,051	1,089	1,016
Less Use of Prior Year Deferrals	−4	−23	—
Total Nuclear Fission	$ 1,047	$ 1,066	$ 1,016

FY 1983 BUDGET

Environment

	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Environment, Safety and Health	$ 62	$ 57	$ 39
Biological and Environmental Research	166	165	130
Policy and Management	2	2	*
Subtotal	230	224	169
Less Use of Prior Year Deferrals	−1	—	—
Total Environment	$ 229	$ 224	$ 169

* Less than $500 Thousand

FY 1983 BUDGET

Supporting Research and Technical Analysis

Supporting Research and Technical Analysis	Budget Authority 1981	Budget Authority 1982	Budget Authority 1983
	($ in Millions)		
Supporting Research			
Basic Energy Sciences	$ 227	$ 243	$ 283
Advisory and Oversight Program Direction	3	3	3
Energy Research Analysis	9	3	3
University Research Support	12	11	5
Multiprogram General Purpose Facilities	25	33	34
Subtotal Supporting Research	$ 276	$ 293	$ 328
In-House Energy Management	23	23	10
Technical Information Center	13	16	9
Plant Engineering and Design (Non Defense)	3	1	—
Policy and Management	1	1	*
Subtotal	316	334	347
Less Use of 1981 Deferrals	−1	−8	—
Total Supporting Research and Technical Analysis	$ 315	$ 326	$ 347

* Less than $500 Thousand

FY 1983 BUDGET

Fossil Energy

	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Coal (includes leasing)	$ 905	$ 513	$ 91
Petroleum	58	41	16
Gas	31	12	—
Subtotal	994	566	107
Less Use of FY 1981 Deferral	—	– 149	—
Total Fossil Energy	$ 994[1]	$ 417	$ 107

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[1] Includes $139M Deferred to FY 1982, $10M of Unobligated Funds Directed for Use in FY 1982, and $173M Transferred in FY 1982 to Energy Conservation.

FY 1983 BUDGET

Fossil Energy

	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Coal			
Mining Research and Development	$ 34	$ 11	$ 1
Coal Liquefaction	513	228	26
Surface Coal Gasification	70	53	11
Underground Coal Gasification	10	8	1
Advanced Research and Technology Development	58	56	20
Control Technology and Coal Preparation	41	25	9
Heat Engines and Heat Recovery	29	16	—
Combustion Systems	38	41	6
Fuel Cells	32	35	9
Magnetohydrodynamics	67	28	—
Leasing	2	—	—
Program Direction	11	12	8
Subtotal Coal	$ 905[1]	$ 513	$ 91

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[1] Includes $136M Deferred to FY 1982, $10M of Unobligated Funds Directed for Use in FY 1982, and $173M Transferred in FY 1982 to Energy Conservation.

FY 1983 BUDGET

Fossil Energy

	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Petroleum			
Enhanced Oil Recovery	$ 17	$ 16	$ 5
Oil Shale	33	19	6
Advanced Process Technology	6	4	4
Program Direction	2	2	1
Subtotal Petroleum	$ 58	$ 41	$ 16
Gas			
Unconventional Gas Recovery	$ 30	$ 11	—
Program Direction	1	1	—
Subtotal Gas	$ 31[1]	$ 12	—
FY 1981 Deferral	—	– 149	—
Total Fossil Energy	$ 994[2]	$ 417	$ 107

[1] Includes $3M Deferred to FY 1982.

[2] Includes $139M Deferred to FY 1982, $10M of Unobligated Funds Directed for Use in FY 1982, and $173M Transferred in FY 1982 to Energy Conservation.

FY 1983 BUDGET

Conservation, Solar and Other Renewables	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Conservation Research	$ 279	$ 144	$ 18
Electric Energy Systems	40	20	0
Energy Storage Systems	72	38	0
Solar Energy	523	257	72
Hydropower	3	3	0
Geothermal	151	53	10
Geothermal Resources Development Fund	−21	2	0
Policy and Management	1	1	1
Subtotal Conservation, Solar and Other Renewables	$ 1,048	$ 518	$ 101
FY 1981 Deferrals	—	−155	0
Total Conservation, Solar and Other Renewables	$ 1,048	$ 363	$ 101

FY 1983 BUDGET

Energy Conservation Research (Energy Storage and Electric Systems)	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Buildings and Community Systems	$ 91	$ 48	$ 0
Industry	70	29	0
Transportation	105	59	0
Multi-Sector	9	8	18
Feasibility Studies	4	0	0
Subtotal Energy Conservation Research (ERTA)	$ 279	$ 144	$ 18
FY 1981 Deferrals	0	−63	0
Total Energy Conservation Research (ERTA)	$ 279	$ 81	$ 18
Electric Energy Systems	$ 40	$ 20	$ 0
Energy Storage Systems	72	38	0
FY 1981 Deferrals	—	−24	—
Total	$ 391	$ 115	$ 18

FY 1983 BUDGET

Solar and Other Renewables	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Solar			
Active Solar Heating and Cooling	$ 44	$ 11	$ —
Passive Solar Heating and Cooling	32	11	—
Photovoltaic Energy Systems	152	74	27
Solar Thermal Energy Systems	138	53	18
Biomass Energy Systems	32	21	7
Wind Energy Systems	77	34	5
Ocean Energy Systems	35	19	—
Other Solar	24	24	12
Alcohol Fuels	18	10	3
General Reduction	−29	—	—
Subtotal Solar	$ 523	$ 257	$ 72
Hydropower	3	3	—
Geothermal Energy	151	53	10
Geothermal Resources Development Fund	−21	2	—
Policy and Management	1	1	1
Less FY 1981 Deferrals	—	−68	—
Total Solar and Other Renewables	$ 657	$ 248	$ 83

FY 1983 BUDGET

Uranium Enrichment

	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Uranium Enrichment	$ 1,167	$ 1,709	$ 1,930
Advanced Isotope Separation Technology	80	86	34
Uranium Resource Assessment	31	10	3
Subtotal Gross Requirements	$ 1,278	$ 1,805	$ 1,967
Less Revenues:			
Commercial Sales	1,301	1,830	1,924
Government Sales	—	—	109
Subtotal Revenues	$ 1,301	$ 1,830	$ 2,033
Revenues Carried Forward to FY 1984	—	—	66
Net Requirements	$ −23	$ −25	0

FY 1983 BUDGET

General Science

	Budget Authority		
	1981	1982	1983
	($ in Millions)		
High Energy Physics	$ 352	$ 365	$ 429
Nuclear Physics	125	134	131
Life Sciences Research and Nuclear Medicine	43	47	39
Program Direction	2	2	2
General Reduction	−5[1]	—	—
Subtotal	517	548	601
Less Use of Prior Year Deferrals	—	−5	—
Total General Science	$ 517	$ 543	$ 601

[1] Reflects a $5 Million general reduction to FY 1981 Appropriation

FY 1983 BUDGET

Defense Activities

	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Weapons Activities	$ 2,317	$ 2,942	$ 3,408
Materials Production	660	904	1,077
Verification and Control Technology	39	50	54
Nuclear Materials Security and Safeguards Development	48	47	47
Security Investigations	19	24	26
Defense Nuclear Waste	304	365	518
Naval Reactors Development	303	359	376
Total Defense Activities	$ 3,690	$ 4,691	$ 5,506

FY 1983 BUDGET

Program Administration (ERTA)	Budget Authority 1981	Budget Authority 1982	Budget Authority 1983
	($ in Millions)		
Management and Support			
• Board of Contract Appeals	$ 0.2	$ 0.3	$ 0.2
• Management and Administration	123.8	139.8	87.5
• Inspector General	7.1	8.1	7.2
• General Counsel	15.3	12.5	3.8
• Office of the Administrator	3.2	2.1	0.6
• Congressional, Intergovernmental & Public Affairs	12.6	6.9	1.9
• Operations Offices	90.3	89.3	62.4
• Miscellaneous Accounts	−10.8	−19.4	−10.8
Total	$ 241.7	$ 239.6	$ 152.8

FY 1983 BUDGET

Energy Conservation Grants	Budget Authority 1981	1982	1983
	($ In Millions)		
State and Local	$ 402	$ 232	$ 4
Multi-Sector	18	8	0
Energy Impact Assistance	10	0	0
Subtotal Energy Conservation Grants	$ 430	$ 240[1]	$ 4
FY 1981 Appropriation Transfers and Deferrals	(0)	−178	0
Total Energy Conservation Grants	$ 430	$ 62	$ 4

[1] Does Not Reflect Impact of Proposed Rescission of $20 Million

FY 1983 BUDGET

Emergency Preparedness, Energy Regulation and Energy Information	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Emergency Preparedness	$ 13	$ 10	$ 5
Energy Regulation	77	11	4
Energy Information	90	79	55
Subtotal	180	100	64
Reappropriation	—	−7	—
Total Emergency Preparedness, Energy Regulation and Energy Information	$ 180	$ 93	$ 64

FY 1983 BUDGET

Administrative Support (Commerce Non-ERTA)	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Administrative Support	$ 28	$ 23	$ 5

FY 1983 BUDGET

Department of the Interior	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Naval Petroleum Reserves	$ 210	$ 213	$ 232
Power Marketing Administrations	175	523	712
Strategic Petroleum Reserve	3,333	3,875	2,316
Administrative Support	2	3	2
Total Department of the Interior	$ 3,720	$ 4,614	$ 3,262

FY 1983 BUDGET

Naval Petroleum Reserves	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Petroleum Reserves	$ 206	$ 210	$ 232
Oil Shale Reserves	4	3	–
Total	$ 210	$ 213	$ 232

FY 1983 BUDGET

Power Marketing Administrations	Budget Authority 1981	Budget Authority 1982	Budget Authority 1983
	($ in Millions)		
Alaska Power Administration	$ 3	$ 4	$ 3
Bonneville Power Administration	—[1]	280[2]	455[2]
Southeastern Power Administration	2	7	12
Southwestern Power Administration	28	21	34
Western Area Power Administration	142	211	208
Total Power Marketing Administrations	$ 175	523	712

[1] There Was No Presentation of Borrowing Authority Until FY 1982.

[2] Reflects Borrowing Authority Estimated to Be Used During FY 1982 and FY 1983.

FY 1983 BUDGET

Strategic Petroleum Reserve	Budget Authority 1981	1982	1983
	($ in Millions)		
On Budget			
Planning	$ 8	$ 9	$ 8
Petroleum Acquisition and Transportation	2,664	—	—
Facilities Development	108	171	223
Program Direction	11	11	11
Subtotal On-Budget	$ 2,791	$ 191	$ 242
Entitlements	542	—	—
Off-Budget			
Petroleum Acquisition and Transportation	$ —	$ 3,684	$ 2,074
Total Strategic Petroleum Reserve	$ 3,333	$ 3,875	$ 2,316

FY 1983 BUDGET

Administrative Support (Department of the Interior)	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Management and Support			
• Management and Administration	$ 1.1	$ 1.2	$ 1.2
• General Counsel	0.2	0.2	0.2
• Legislative Affairs	0.1	0.1	0.1
• Power Marketing Coordination	0.6	1.0	0.4
Total	$ 2.0	$ 2.5	$ 1.9

FY 1983 BUDGET

Department of Justice	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Petroleum Regulatory Activities			
Compliance	$ 71	$ 37	$ 14
Office of Hearings and Appeals	7	4	4
Subtotal	78	41	18
Administrative Support	2	2	2
Subtotal	80	43	20
Reappropriation	—	−32	—
Total Department of Justice	$ 80	$ 11	$ 20

FY 1983 BUDGET

Petroleum Regulatory Activities (Department of Justice)	Budget Authority 1981	Budget Authority 1982	Budget Authority 1983
	($ in Millions)		
Compliance	$ 71	$ 37	$ 14
Hearings and Appeals	7	4	4
Subtotal	78	41	18
Reappropriation	—	−32	—
Total	$ 78	$ 9	$ 18

FY 1983 BUDGET

Administrative Support (Department of Justice)	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Management and Support			
• Management and Administration	$ 0.9	$ 0.9	$ 0.9
• General Counsel	1.3	1.4	1.4
• Legislative Affairs	0.1	0.1	0.1
Total	$ 2.3	$ 2.4	$ 2.4

FY 1983 BUDGET

Federal Energy Regulatory Commission	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Natural Gas Regulation	$ 38	$ 36	$ 43
Hydropower Licensing Regulation	15	16	23
Oil Pipeline Regulation	8	8	7
Electric Power Regulation	15	16	19
Natural Gas Activities	1	1	1
Offsetting Receipts	—	—	−60
Total, Federal Energy Regulatory Commission	$ 77	$ 77	$ 33

FY 1983 BUDGET

Program Administration (DOE)	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Management and Support			
• Board of Contract Appeals	$ 0.3	$ 0.3	$ 0.2
• Policy, Planning and Analysis	15.3	14.7	1.7
• International Affairs	8.9	4.9	0.4
• Management and Administration	128.7	145.1	92.3
• Inspector General	7.1	8.1	7.2
• General Counsel	17.7	15.0	6.3
• Office of the Secretary	3.2	2.1	0.6
• Congressional, Intergovernmental & Public Affairs	12.9	7.2	2.2
• Operations Offices	90.3	89.3	62.4
• Miscellaneous Accounts	−10.8	−19.4	−10.9
Total	$ 273.6	$ 267.3	$ 162.4

FY 1983 BUDGET

Energy Conservation (DOE)	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Buildings and Community Systems	$ 91	$ 48	$ 0
Industry	70	29	0
Transportation	105	59	0
State and Local	402	232	4
Multi-Sector	26	16	18
Energy Impact Assistance	10	0	0
Feasibility Studies	5	0	0
Subtotal Energy Conservation (DOE)	$ 709	$ 384	$ 22
FY 1981 Deferrals		−68	0
FY 1981 Appropriation Transfers		−173	0
Total Energy Conservation (DOE)	$ 709	$ 143	$ 22

FY 1983 BUDGET

EMERGENCY PREPAREDNESS AND ENERGY REGULATION

	BUDGET AUTHORITY		
	FY 1981	FY 1982	FY 1983
	($ IN MILLIONS)		
OFFICE OF ENERGY EMERGENCIES	$ 10	$ 8	$ 5
ECONOMIC REGULATORY ADMINISTRATION	122	47	16
OFFICE OF HEARINGS AND APPEALS	8	5	6
GASOLINE RATIONING PREIMPLEMENTATION PROJECT OFFICE	26	—	—
REAPPROPRIATION	—	−38	—
TOTAL EMERGENCY PREPAREDNESS AND ENERGY REGULATION	$166	$22	$27

FY 1983 BUDGET

Energy and Water Development Subcommittee	Budget Authority		
	1981	1982	1983
	($ in Millions)		
Department of Commerce			
Energy Research and Technology Administration			
Atomic Energy Defense Activities	$ 3,690	$ 4,691	$ 5,506
General Science and Research Activities	517	543	601
Energy Supply Research and Development	2,775	2,323	1,875
Uranium Supply and Enrichment Activities	−23	−25	—
Geothermal Resources Development Fund	−21	2	—
Nuclear Waste Disposal Fund (Proposed Legislation)	—	—	185
Program Administration	242	240	153
Non ERTA Department of Commerce			
Administrative Support for Energy Programs	28	23	5
Department of the Interior			
Alaska Power Administration	3	4	3
Bonneville Power Administration	—	280	455
Southeastern Power Administration	2	7	12
Southwestern Power Administration	28	21	34
Western Area Power Administration	142	211	208
Administration Support for Energy Programs	2	2	2
Department of Justice			
Administrative Support for Petroleum Regulatory	2	2	2
Federal Energy Regulatory Commission			
Federal Energy Regulatory Commission	76	76	32
Total Energy and Water Development	$ 7,463	$ 8,400	$ 9,073

FY 1983 BUDGET

Interior and Related Appropriations Subcommittee	Budget Authority 1981	1982	1983
	($ in Millions)		
Department of Commerce			
Energy Research & Technology Administration			
Fossil Energy Research and Development	$ 994	$ 417	$ 107
Energy Conservation Research	279	81	18
Alternative Fuels Production	− 300	—	—
Non ERTA Department of Commerce			
Energy Information Administration	90	79	55
Energy Conservation Grants	430	62	4
Emergency Preparedness and Energy Regulation	90	14	9
Department of the Interior			
Naval Petroleum and Oil Shale Reserves	210	213	232
Strategic Petroleum Reserve	3,333	3,875	2,316
Department of Justice			
Petroleum Regulatory Activities	78	9	18
Federal Energy Regulatory Commission			
Other Natural Gas Activities	1	1	1
Total Interior & Related Appropriations Subcommittee	$ 5,205	$ 4,751	$ 2,760

FY 1983 BUDGET

PROPOSED FY 1982 RESCISSIONS

($ IN MILLIONS)

	BUDGET AUTHORITY	BUDGET OUTLAYS
RESCISSIONS		
EPCA GAS RATIONING GRANTS	$ 5.7	$ 4.8
ENERGY IMPACT ASSISTANCE	14.3	12.2
TOTAL RESCISSIONS	$ 20.0	$ 17.0

FY 1983 BUDGET

Staffing

	Actual Employment - Total	Full-Time Equivalents - Total	
	FY 1981, End of Year	FY 1982	FY 1983
Total Programs	19,330	18,375	14,541

FY 1983 BUDGET

Staffing Summary

	Actual Employment - Total	Full-Time Equivalents - Total	
	FY 1981, End of Year	FY 1982	FY 1983
Department of Commerce			
Energy Research and Technology Administration	9,664	9,247	5,966
Non-Research and Development Activities	1,545	1,181	705
Subtotal	(11,209)	(10,428)	(6,671)
Department of the Interior	5,485	5,625	5,623
Department of Justice	980	637	415
Federal Energy Regulatory Commission	1,656	1,685	1,832
Total	19,330	18,375	14,541

FY 1983 Budget

Staffing

	Actual Employment-Total	Full-Time Equivalents-Total	
	FY 1981	FY 1982	FY 1983
Department of Energy	19,330	18,375	0
Department of Commerce			
Energy Research and Technology Admin.	—	—	5,966
Non-Research and Development Activities	—	—	705
Subtotal	0	0	6,671
Department of the Interior	0	0	5,623
Department of Justice	0	0	415
Federal Energy Regulatory Commission	(Included in DOE Above)		1,832
Total	19,330	18,375	14,541

FY 1983 BUDGET

Staffing
Department of Commerce

	Actual Employment - Total	Full-Time Equivalents - Total	
	FY 1981, End of Year	FY 1982	FY 1983
Energy Research & Technology Administration			
Research and Development Programs			
Magnètic Fusion	67	71	71
Nuclear Fission	479	532	423
Environment	210	204	105
Supporting Research and Technical Analysis	524	513	245
Fossil Energy	1,289	1,131	541
Conservation Solar and Other Renewables	501	406	106
Subtotal	3,070	2,857	1,491
Uranium Enrichment	126	146	69
General Science	35	36	36
Defense Activities	2,287	2,327	2,207
Program Administration	4,146	3,975	2,163
Subtotal	9,664	9,341	5,966
Overauthorization Adjustment	—	−94	—
Subtotal Energy Research and Technology Administration	9,664	9,247	5,966

FY 1983 BUDGET

Staffing

Department of Commerce

	Actual Employment - Total	Full-Time Equivalents - Total	
	FY 1981, End of Year	FY 1982	FY 1983
Non-R&D Energy Activities			
Energy Conservation Grants	162	100	64
Emergency Preparedness and Energy Regulation	439	181	138
Energy Information	603	584	415
Administrative Support	341	316	88
Subtotal	1,545	1,181	705
Total Department of Commerce	11,209	10,428	6,671

FY 1983 BUDGET

Staffing
Department of the Interior

	Actual Employment - Total	Full-Time Equivalents - Total	
	FY 1981, End of Year	FY 1982	FY 1983
Naval Petroleum Reserves	88	120	120
Power Marketing Administrations	5,155	5,243	5,261
Strategic Petroleum Reserve	195	215	200
Administrative Support	47	47	42
Total Department of Interior	5,485	5,625	5,623

FY 1983 BUDGET

Staffing
Department of Justice

	Actual Employment - Total	Full-Time Equivalents - Total	
	FY 1981, End of Year	FY 1982	FY 1983
Petroleum Regulatory Activities			
Compliance	843	485	263
Office of Hearings and Appeals	87	102	102
Administrative Support	50	50	50
Total Department of Justice	980	637	415

FY 1983 BUDGET

Staffing

Federal Energy Regulatory Commission

	Actual Employment - Total	Full-Time Equivalents - Total	
	FY 1981, End of Year	FY 1982	FY 1983
Federal Energy Regulatory Commission	1,641	1,673	1,820
Economic Regulation	15	12	12
Total FERC	1,656	1,685	1,832

FY 1983 BUDGET

Interior and Related Appropriations Subcommittee

	Actual Employment - Total	Full-Time Equivalents - Total	
	FY 1981	FY 1982	FY 1983
Department of Commerce			
Energy Research & Technology Administration	(1510)	(1288)	(582)
Energy Conservation Research	221	157	41
Fossil Energy R&D	1289	1131	541
Non ERTA Department of Commerce	(1204)	(865)	(617)
Energy Information Administration	603	584	415
Energy Conservation Grants	162	100	64
Emergency Preparedness & Energy Regulation	439	181	138
Department of Interior	(283)	(335)	(320)
Naval Petroleum & Oil Shale Reserves	88	120	120
Strategic Petroleum Reserve	195	215	200
Department of Justice			
Petroleum Regulatory Activities	930	587	365
Federal Energy Regulatory Commission			
Other Natural Gas Activities	15	12	12
Total Interior & Related Appropriations Subcomm.	3,942	3,087	1,896

FY 1983 BUDGET

Energy and Water Development Subcommittee

	Actual Employment - Total	Full-Time Equivalents - Total	
	FY 1981, End of Year	FY 1982	FY 1983
Department of Commerce			
Energy Research and Technology Administration	(8154)	(8053)	(5384)
Atomic Energy Defense Activities	2287	2327	2207
General Science and Research Activities	35	36	36
Energy Supply Research and Development	1557	1564	907
Uranium Supply and Enrichment Activities	126	146	69
Geothermal Resources Development Fund	3	5	2
Program Administration	4146	3975	2163
Non ERTA Department of Commerce			
Administrative Support for Energy Programs	341	316	88
Department of the Interior	(5202)	(5290)	(5303)
Alaska Power Administration	41	44	36
Bonneville Power Administration	3547	3616	3616
Southeastern Power Administration	37	39	39
Southwestern Power Administration	174	192	192
Western Area Power Administration	1356	1352	1378
Administration Support for Energy Programs	47	47	42

FY 1983 BUDGET

Energy and Water Development Subcommittee

	Actual Employment - Total	Full-Time Equivalents - Total	
	FY 1981, End of Year	FY 1982	FY 1983
Department of Justice			
Administrative Support for Petroleum Regulatory	50	50	50
Federal Energy Regulatory Commission			
Federal Energy Regulatory Commission	1,641	1,673	1,820
Total	15,388	15,382	12,645

DOE/MA-0062

U.S. DEPARTMENT OF COMMERCE
U.S. DEPARTMENT OF THE INTERIOR
U.S. DEPARTMENT OF JUSTICE
FEDERAL ENERGY REGULATORY COMMISSION

FEDERAL ENERGY PROGRAMS

FY1983

BUDGET HIGHLIGHTS

FEBRUARY 1982

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Prepared by
U.S. Department of Energy

Federal Energy Programs
FY 1983 Budget Highlights

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OVERVIEW

The FY 1983 budget request for Federal Energy Programs reflects the President's proposal to reorganize the Federal Government's role in Energy and Commerce. This proposal would strengthen and focus our efforts in energy policy, research, weapons production, strategic/emergency planning and international trade, while reducing our efforts to control and regulate energy usage in the United States. The result would be a stronger Energy - and Commerce organization.

The reorganization of the Department of Energy is the culmination of a process which began last year to place more reliance on the private sector in resolving our energy problems. In the intervening months, a task force led by the Secretary of Energy developed a number of proposals to realign the Government's role in the energy area and eliminate the unnecessary regulation and bureaucracy which have hindered efficient production and use of energy. The Government's role should emphasize the establishment of sound public policies so that individuals and firms have the incentive to produce and use energy efficiently. In addition, there are four basic energy responsibilities unique to the Federal Government which must be continued:

- o Protecting against energy supply disruptions, primarily through planning and maintenance of the Strategic Petroleum Reserve;
- o Providing support to long-term, high-risk, high-payoff research, but not research and development for the purpose of accelerating new technologies into the marketplace;
- o Supporting national defense needs through civilian control of research, development, production and testing of nuclear weapons; and
- o Performing tasks such as operation of Federal resource reserves, power marketing, and utility regulation as required by law.

The existence of the Department of Energy as a cabinet level agency has made more difficult the exercise of legitimate Federal responsibilities. The existence of the Department and its regulatory powers has made it more difficult for private citizens to take the initiative to make energy choices based on realistic prices and clear tests of profitability. In addition, the bureaucracy of the Department has become enmeshed in programs designed to subsidize and encourage unnecessary and unprofitable or marginally profitable technologies as opposed to letting the private sector select and commercialize technologies based on tests of efficiency and economy. These programs also drew resources away from programs which truly represent a proper Federal role, such as support for long-term, high-risk research and development which the private sector cannot reasonably be expected to undertake.

The reorganization will correct these problems, permit the government to concentrate on management of its basic energy responsibilities, and consolidate government's policy and program efforts to strengthen our economy at home and in the international marketplace. These responsibilities will be divided principally between the Department of Commerce and the Department of the Interior, although certain enforcement activities will go to the Department of Justice, and the Federal Energy Regulatory Commission will become an independent agency.

The Department of Commerce will receive the bulk of the energy programs currently managed by the Department of Energy. A new agency, the Energy Research and Technology Administration (ERTA), will be established within the Department of Commerce to manage energy research and development, uranium enrichment, general science and defense activities. Key programs will be transferred intact to minimize disruption to ongoing activities.

The creation of ERTA will allow more specialized management of the high technology energy, science, and weapons programs than was possible in the Department of Energy. The streamlined new organization should provide better focused, more efficient operations, and the synergistic relationship among these programs should be more easily maintained. Other energy functions, such as energy information collection, emergency preparedness planning, and conservation grant management also will be administered by the Department of Commerce, but not as part of ERTA. The Department of Commerce is particularly well suited to manage these programs because of its current information collection and statistical functions and its existing relationships with the business community and with State and local governments.

The Department of the Interior will manage Federally owned energy resources including the Strategic Petroleum Reserve, the Naval Petroleum and Oil Shale Reserves, and the five Power Marketing Administrations. The Department of the Interior's expertise in natural resource management makes it the logical recipient for these programs.

The FY 1983 budget request for energy activities formerly administered by the Department of Energy is summarized below in the proposed reorganization structure, with FY 1982 figures supplied on a comparable basis. Appendix B provides a summary of comparability adjustments.

	Budget Authority (in millions)	
	FY 1982	FY 1983
Department of Commerce		
Energy Research and Technology Administration		
Research and Development Programs	$ 2,822	$ 2,184
Uranium Enrichment Activities	-25[a]	-- [a]
General Science	543	601
Defense Activities	4,691	5,506
Program Administration	240	153
Subtotal, Energy Research and Technology Administration	8,271	8,444
Non-R&D Energy Functions	178	73
Total, Department of Commerce	$ 8,449	$ 8,517
Department of the Interior		
Naval Petroleum and Oil Shale Reserves	$ 213	$ 232
Power Marketing Administrations	523	712
Strategic Petroleum Reserve	3,875[b]	2,316[b]
Administrative Support	3	2
Total, Department of the Interior	$ 4,614	$ 3,262
Department of Justice		
Petroleum Regulatory Activities	$ 11	$ 20
Total, Department of Justice	$ 11	$ 20
Federal Energy Regulatory Commission	$ 77	$ 33
TOTAL, FEDERAL ENERGY PROGRAMS	$13,151[c]	$11,832

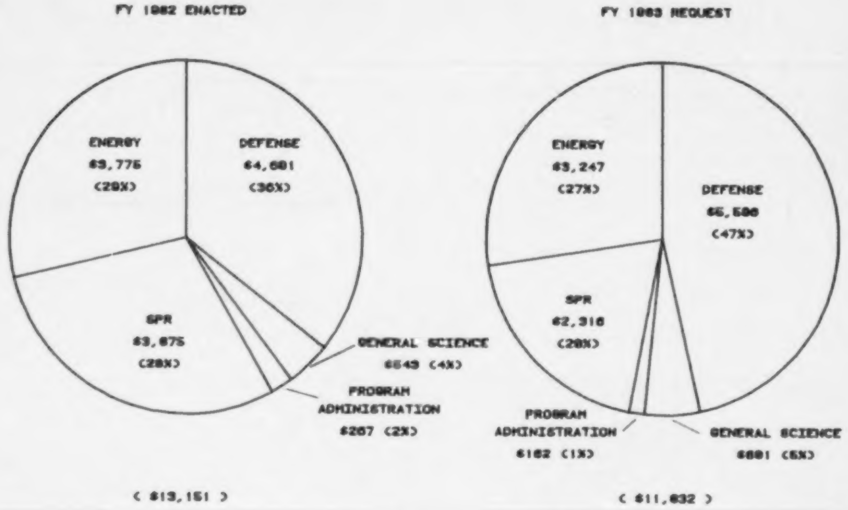
[a] Budget request less revenues.

[b] Includes off-budget oil acquisition and transportation funds of $3,684 million in FY 1982, and $2,074 million in FY 1983.

[c] Does not include FY 1981 deferrals and unobligated balances applied as specified by FY 1982 Appropriation Acts.

Overall, the energy request represents a ten percent decrease over FY 1982 funding estimates. Areas where funding will be reduced include energy research and development and the Strategic Petroleum Reserve. Other major activities have increased funding requirements, including Defense Activities, Power Marketing, and General Science.

The distribution of funds by major function, disregarding organizational boundaries, is shown in the following figures:



DOLLARS IN MILLIONS

Energy activities, which represent 27 percent of the overall budget in FY 1983, show a 14 percent decline from FY 1982. This decline is due primarily to a continuation of the redirection begun last year of the fossil, conservation, and renewable resource programs away from expensive technology demonstrations in favor of long-term, high-risk, potentially high-payoff research and development. In addition, no funds are requested to continue the State conservation grant programs.

The Strategic Petroleum Reserve provides a measure of security against possible future oil supply disruptions. This activity represents 20 percent of the FY 1983 request, down from 29 percent in FY 1982. Despite this reduction, the total available capacity of the Reserve will be filled by the end of FY 1983.

The programs included in General Science support basic research to expand our knowledge of the fundamental structure and behavior of matter. The ten percent increase in General Science reflects a continuing commitment to support rigorous research in high energy physics, nuclear physics, and life sciences.

Defense Activities, which represent 47 percent of the overall request, support the national security mission of the Department of Defense through the development, testing, and production of nuclear weapons and materials. The increase in funding from $4,691 million in FY 1982 to $5,506 million in FY 1983 is principally related to increased requirements for the production of nuclear weapons.

Funding requirements for Program Management overhead activities are reduced in FY 1983, due largely to a decline in the number of Federal employees resulting from the elimination of marginal programs and the increased efficiency anticipated with the elimination of the Department of Energy as a cabinet level organization.

The FY 1983 budget request for Federal Energy Programs will provide for effective support for those energy activities which are uniquely a Federal responsibility, housed in departments and agencies that can most effectively administer them. The following pages discuss the FY 1983 request in greater detail.

DEPARTMENT OF COMMERCE

With the enactment of the President's proposal for reorganization of the federal energy establishment, the Department of Commerce will become the parent cabinet-level organization for the majority of functions currently administered by DOE. The Research and Development (R&D) functions will be incorporated into a new organization within Commerce - the Energy Research and Technology Adminstration (ERTA). Other DOE functions, including Energy Conservation Grants, Emergency Preparedness and the Energy Information Administration (EIA) will be placed elsewhere within the Department of Commerce.

ENERGY RESEARCH AND TECHNOLOGY ADMINISTRATION

The programs which will comprise ERTA can be grouped into three general categories: energy, general science, and defense.

The energy category includes R&D in magnetic fusion, nuclear fission, fossil, conservation, solar and geothermal technologies and provision of uranium enrichment services for domestic and foreign customers.

The general science category includes basic research in high energy physics, nuclear physics, and the life sciences, and applications research on nuclear medicine.

The defense category provides for nuclear weapons requirements of the Department of Defense through research, development, testing, production, and surveillance of nuclear weapons, production of nuclear materials, improvements to naval reactor design and performance, verification, security and safeguards activities.

The following pages describe ERTA's activities in detail.

Research and Development Programs

The research and development programs to be undertaken by ERTA are primarily long-term, high-risk efforts with potentially high payoffs in terms of increased energy supplies and greater efficiency of energy use. In addition to specific energy technology programs, ERTA will conduct research in basic energy sciences and on environmental impacts of energy technologies, utilizing a network of highly specialized research facilities.

The funding for the ERTA research and development programs is shown in the accompanying tabulation:

	Budget Authority (in millions) FY 1982	FY 1983
Magnetic Fusion..........................	$ 454	$ 444
Nuclear Fission..........................	1,089	1,016
Environment..............................	224	169
Supporting Research & Technical Analysis.	334	347
Fossil Energy............................	566	107
Conservation, Solar & Other Renewables...	518	101
TOTAL RESEARCH & DEVELOPMENT...........	$ 3,185	$ 2,184
Less FY 1981 Deferrals/Unobligated Balances	-363	--
TOTAL NEW BUDGET AUTHORITY.............	$ 2,822	$ 2,184

Magnetic Fusion

Development of fusion energy may provide access to an essentially inexhaustible energy resource base. The overall objective of the Magnetic Fusion Energy program is to develop the highest potential of fusion energy in an economical and environmentally acceptable way. In order to accomplish this, the strategy is to maintain a broad technical base program which supports two concurrent lines of investigation. One line is the engineering effort aimed at developing experience with the practical problems of creating and maintaining a burning plasma. The other is scientific investigation aimed at resolving the technical uncertainties of achieving the burning plasma and developing more optimum reactor concepts. The synthesis of these efforts is intended to demonstrate fusion's engineering feasibility and provides the basis for determining the role of fusion power in the nation's energy future. A positive assessment will lead to a commitment for the development of an optimum, practical, energy producing system.

The FY 1983 budget request of $444.1 million represents an overall decrease of $9.7 million from the FY 1982 level. The request will provide for continuation of a scientifically oriented fusion program with a limited engineering effort. The plasma confinement effort will be aimed at pursuing mainline tokamak and mirror concepts. The Tandem Mirror Experiment Upgrade at Lawrence Livermore Laboratory (LLL) will be operating. Construction of the Tokamak Fusion Test Reactor (TFTR) project at the Princeton Plasma Physics Laboratory will be completed.

The most significant increase in the FY 1983 budget request is associated with completing preparations and initiating operations of the TFTR. Funds will also be utilized to fabricate an Advanced Toroidal Facility at ORNL and improve the capability of the existing Doublet III machine at General Atomic in order to provide the research tools necessary to address the physics issues in present and advanced toroidal concepts. Funding is also provided to continue construction activities on the Mirror Fusion Test Facility-B at LLL.

Nuclear Fission

The Nuclear Fission programs provide the technological base to continue to develop nuclear power as an economic and environmentally acceptable source of electric power. Funding for nuclear fission programs is allocated as follows:

	Budget Authority (in millions)	
	FY 1982	FY 1983
Commercial Nuclear Waste.................	$ 210	$ 80
Nuclear Waste Disposal Fund..............	--	185
Advanced Nuclear Systems.................	38	31
Converter Reactor Systems................	96	32
Nuclear Fuel Cycle.......................	53	59
Breeder Reactor Systems..................	647	577
Remedial Action..........................	43	50
Policy and Management....................	2	2
TOTAL NUCLEAR FISSION..................	$ 1,089	$ 1,016
Less FY 1981 Deferrals...................	-23	--
TOTAL NEW BUDGET AUTHORITY.............	$ 1,066	$ 1,016

The objective of the Commercial Nuclear Waste Management program is to plan, develop and implement the technology and provide the facilities for terminal isolation necessary for the long-term management and disposal of radioactive wastes produced in the civilian sector. Program elements include terminal isolation R&D, waste systems technology, and the West Valley Demonstration Project.

The Terminal Isolation element of this program is proposed to be funded through both direct appropriations and a revolving fund. The combined FY 1983 budget request for these activities is $235.4 million. The FY 1983 budget request for terminal isolation R&D activities is $50.4 million. These activities are those technology development efforts, conducted independent of geologic media, necessary to support repository design, licensing, construction, operation, and decommissioning. Studies of the subseabed disposal concept and transportation technology are also included in the generic R&D task.

Waste systems technology provides grants to states where respository site investigations are underway to allow them to participate in the siting programs; conducts studies to provide independent assessments of technical and institutional waste management issues; and develops low-level waste technology to assist states in developing licensed low-level waste burial grounds.

The objective of the West Valley Demonstration Project is to carry out a high-level waste solidification demonstration project at the Western New York Nuclear Service Center near West Valley, New York, under provisions of Public Law 96-368, the "West Valley Demonstration Project Act." In FY 1983, it is planned to perform development, conceptual design and site facility operations activities at the West Valley Demonstration project site.

The Administration is proposing that a Nuclear Waste Disposal Fund be established to finance the project-specific activities leading to the operation of a commercial high-level waste repository. Revenues for the fund are expected to start in FY 1983 and will be provided by fees paid by utilities which generate nuclear power. The FY 1983 budget request is for $185 million of Borrowing Authority to assure FY 1982 program continuity early in the year until the fees have been collected from the utilities later in the fiscal year.

A projection of fees to finance the fund for the next five years is as follows:

Nuclear Waste Disposal Fund

Projected Annual Fees
(Dollars in Millions)

FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
$ 300	$ 501	$ 549	$ 627	$ 659

The project-specific activities to be financed by the fund include site characterization, exploratory shafts, the test and evaluation facility, the design, licensing, construction, operation, and decommissioning of the repositories and directly related supporting technology to assure the adequacy of the project-specific activities.

Currently the program is focusing on four main geographic areas: the basalt flows underlying the Hanford Site in Washington, the Yucca Mountain tuff formation at the Nevada Test Site; salt domes in the Gulf Coast States and Bedded Salt formations in Texas and Utah. These four areas will be screened to select three sites which will be investigated at repository depth using exploratory shafts. The program also is focusing on development of a test and evaluation facility which will provide experience on actual waste handling under repository conditions. The Agency will use the data available from these efforts by FY 1988 to submit a license application for a full scale repository.

The Advanced Nuclear Systems program is responsible for the development and delivery of nuclear power sources for U.S. military and civilian space and terrestrial missions. The budget request for FY 1983 is $30.6 million, which will support development of the isotope power sources for the NASA Galileo spacecraft and the NASA/European Space Agency (ESA) Solar Polar spacecraft. The component development efforts for the Space Power Advanced Reactor system will be continued in conjunction with NASA.

The Converter Reactor Systems program consists of two major activities: Light Water Reactor systems and the Three Mile Island activities. The budget request for FY 1983 is $32.0 million.

During FY 1982, the Light Water Reactor (LWR) systems program was redirected to emphasize those technical activities which contribute to the resolution of regulatory reform matters and provide an improved public understanding of the key issues associated with nuclear power. Therefore, activities in FY 1983 are to concentrate efforts on ameliorating regulatory impacts, to continue in the role of technical arbiter for LWR safety related items, and to provide a forum and internal organization that can successfully coordinate a comprehensive national safety program. Under the LWR extended burnup program, efforts to relieve pressure on the back end of the fuel cycle by reducing the volume of spent fuel generated in LWR's will continue, with one fuel design for demonstration with a utility participant. Work on other designs will be closed out.

The Agency's Three Mile Island (TMI) program is designed to enhance the safety and reliability of generic nuclear powerplant design and to improve the capability to decontaminate civilian nuclear powerplants.

During FY 1983 the TMI activities will be conducted in two areas. The data acquisition subprogram will include inspection of instrumental and electrical components; obtaining and analyzing solid, liquid, and gaseous radioactive samples; planning for off-site examination of selected specimens to be removed from the damaged TMI reactor core; and data and specimen storage for future use.

The TMI Reactor Evaluation and Waste Immobilization subprogram will concentrate on development work associated with the defueling and will focus on other techniques for the treatment of abnormal wastes produced at TMI, including alternative immobilization concepts, confidence testing, and long term sample observation to provide an extensive data base.

The objective of the Nuclear Fuel Cycle program is to close the nuclear fuel cycle by focusing on the back end, which includes the creation of a favorable environment for commercial reprocessing, development of reprocessing technologies, of waste forms compatible with repository disposal criteria, and of advanced spent fuel storage technology which will provide additional storage at reactors until reprocessing and disposal facilities and processes become available.

The FY 1983 budget request of $59.3 million will provide for continued support for the development and testing of advanced safeguard systems, spent fuel, plutonium, and waste handling and processing systems necessary for the private sector startup of Barnwell as a commercial reprocessing center; continued tests and documentation support of license applications for rod consolidation and dry storage technologies to increase at-reactor storage of commercial spent fuel; initial selection of a process and waste form which would be acceptable to the Federal Government; design of a reference facility concept for providing an interim storage capability for radioactive wastes generated from reprocessing spent fuel; and advanced concepts research to support development and demonstration of advanced fuel reprocessing technology for LWR and Breeder fuel cycles.

The FY 1983 budget request for the Breeder Reactor Systems program is $577.5 million. The mission of the Liquid Metal Fast Breeder Reactor (LMFBR) base program is to conduct research and development in order to advance the requisite technology to the point where the private sector is able to support construction and operation of safe, reliable liquid metal fast breeder reactor plants to supply electricity to the grid. However, in mid-FY 1982, in support of the President's Economic Recovery Program, the Agency will begin to consolidate and phase down certain aspects of the program. This is necessary so that the resources provided in FY 1983 can be used in the most cost effective manner. The breeder program will continue to support technology development and aim at resolution of licensing issues which presently bear on the public perception of risk. Research and development programs will continue in fuels development, materials and structures, and all will be supported by the necessary facility operations.

The principal plant project included in the LMFBR program is the Clinch River Breeder Reactor (CRBR). The overall objective of the CRBR project is to design, construct, and test the Nation's first intermediate scale (375 megawatt electric) LMFBR power plant and test the plant as part of a utility system. The CRBR will provide important information regarding the safety, environmental, and economic potential of LMFBR's as an essentially inexhaustible domestic energy source. In FY 1983, the site preparation activities will continue as well as the required licensing support, design work, and equipment procurement and fabrication activities.

The Water Cooled Breeder program will provide funds for conducting the Light Water Breeder Reactor (LWBR) end-of-life program. This includes core physics and engineering testing, fuel removal and partial disassembly of the core at the Shippingport Reactor, as well as transferring fuel from Shippingport to the Extended Core Facility for disassembly and core examinations to determine proof of breeding.

The objectives of the Remedial Action program are to prevent radioactively contaminated sites and facilities which are no longer required or used from becoming actual or potential health, safety or environmental hazards, and to release property for alternative productive use with minimal or no restrictions. The four major program areas include remedial action at formerly utilized Manhattan Engineering District and Atomic Energy Commission (MED/AEC) sites and Grand Junction, Colorado; remedial actions at inactive uranium mill tailings sites; and management of certain surplus civilian nuclear energy program facilities which are radioactively contaminated.

The budget request for FY 1983 is $50.3 million which will provide funding for the cleanup of the West Ditch in the vicinity of the Niagara Falls Storage Site in New York; initiation of design engineering for the remedial action at the Middlesex, New Jersey, municipal landfill and for the Linde Air Products site in Tonawanda, NJ; continuation of ocean disposal research and development for residual waste material from the Middlesex Sampling Plant; continued remedial actions at vicinity properties near the Canonsburg, Salt Lake City, and Grand Junction processing sites; initiation of vicinity property work at Durango and Rifle, and completion of the engineering, design and planning phases of the Shippingport Atomic Power Station (SAPS) Decommissioning Project.

Environment

The Government is required to formulate programs so that the Nation can effectively balance its energy production requirements with the environment. Environment, health and safety factors will continue to be closely integrated into energy research and development activities. The budget for FY 1982 and FY 1983 is allocated as follows:

	Budget Authority (in millions) FY 1982	Budget Authority (in millions) FY 1983
Environment, Safety and Health...........	$ 57	$ 39
Biological and Environmental Research....	165	130
Policy and Management....................	2	*
TOTAL ENVIRONMENT.......................	$ 224	$ 169

* Less than $0.5 million.

The goal of the Environment, Safety and Health program is to develop environmental policies and standards that insure safety in all Agency processes and programs, assure public safety and environmental protection with respect to operations, including the operation of reactors and non-reactor nuclear facilities, and assure compliance with current and anticipated environmental statutes and regulations. The budget request for FY 1983 is $39 million. Activities include insuring National Enviromental Policy Act compliance; implementing increased nuclear safety/quality assurance activities; performing radiological surveys to assist the Remedial Action program to clean up uranium mill tailings sites in response to P.L. 95-604, the Uranium Mill Tailing Radiation Control Act of 1978; and performing environmental analysis and assessment activities. Studies are also conducted on the health and environment issues resulting from the U.S. nuclear weapons testing program in the Marshall Islands and the Nevada Test Site and its surrounding areas.

The goal of Biological and Environmental Research is to develop a comprehensive research program to obtain scientific data for determining health and environmental effects associated with the production and utilization of this Nation's domestic energy resources. The budget request for FY 1983 is $129.8 million. This program will support long-term generic research on health and environmental effects associated with energy development and use; research on global carbon cycle and the effects of increasing carbon dioxide on climate; and research on the occupational effects of low level ionizing radiation from nuclear power and defense activities.

Supporting Research and Technical Analysis

The role of Supporting Research and Technical Analysis is to expand the scientific and engineering knowledge base on which the Nation's future energy options depend, and to provide independent, objective analysis and assessments of research and technical needs relating to energy. The FY 1983 funding request for this effort is $347 million, allocated as follows:

	Budget Authority (in millions) FY 1982	Budget Authority (in millions) FY 1983
Basic Energy Sciences....................	$ 243	$ 283
Energy Research Analysis.................	3	3
University Research Support..............	11	5
Advisory and Oversight Program Direction.	3	3
Multiprogram General Purpose Facilities..	33	34
In-House Energy Management...............	23	10
Technical Information Center.............	16	9
Plant Engineering and Design.............	1	--
Policy and Management....................	1	*
TOTAL SUPPORTING RESEARCH AND TECHNICAL ANALYSIS..................	$ 334	$ 347
Less FY 1981 Deferrals...................	-8	--
TOTAL NEW BUDGET AUTHORITY.............	$ 326	$ 347

* Less than $0.5 million.

The purpose of the Basic Energy Sciences (BES) program is to provide knowledge that is relevant to energy exploration, production, conversion, and use. To carry out the program, BES plans, supports, and administers energy related research in the physical and biological sciences, engineering, applied mathematics, and geosciences.

In FY 1983, the budget request of $282.9 million will enable the program to maintain most of the ongoing core research program and will permit some growth in biological energy research, advanced energy projects, and engineering, mathematics and geosciences. In addition, BES will continue to operate a network of research facilities at the National Laboratories, some of which are unique in the world.

In FY 1983, BES will support research using major facilities such as the National Synchrotron Light Source at Brookhaven National Lab, and the Combustion Research Facility at Sandia Laboratories. Funding is also provided for modifications of the Weapons Neutron Research Facility at the Los Alamos Scientific Laboratory, which will be the first in a new generation of neutron sources for civilian research. In FY 1983, this program will assume the responsiblity for operation of the Stanford Synchrotron Radiation Laboratory, formerly funded by the National Science Foundation.

The Energy Research Analysis program provides funding for independent, objective assessments of research and development programs and related issues. The FY 1983 budget request of $2.6 million is expected to support five major assessments.

The FY 1983 budget request of $5.1 million for University Research Support maintains $1.6 million for the Reactor Fuel Assistance Program, and $3.5 million for the University Laboratory Cooperative Program.

Advisory and Oversight Program Direction funds the Director of Energy Research and immediate staff, the personnel who administer the University Research Support, Energy Research Analysis, and Multiprogram General Purpose Facilities programs, and who conduct analyses for the Director of Energy Research.

The objective of the Multiprogram General Purpose Facilities program is to replace or rehabilitate general purpose facilities at the 12 multiprogram laboratories. The investment in offices, laboratories, warehouses, electrical and mechanical utilities, roads, and railroads is substantial. The average age of buildings and utilities is 25 years. The Multiprogram General Purpose Facilities program was established in recognition that replacement of aging general purpose facilities is a legitimate cost of conducting research and development work at the laboratories. For FY 1983, the program requests $34 million to continue construction projects begun in prior years and to initiate four new starts.

The request of $10 million for In-House Energy Management will provide for continuing emphasis on energy conservation in Agency facilities through retrofit construction projects. The major objectives are to reduce energy consumption by 20 percent per square foot in all buildings and facilities by 1985, and to retrofit all buildings with cost-effective energy conservation retrofits by 1990.

The request of $8.9 million for the Technical Information Center will provide program management and control of technical reports resulting from the Agency's R&D activities, maintain an energy data base for use by program offices, and provide a classified technical information system for Defense programs.

Fossil Energy

This Nation has abundant domestic resources of coal, petroleum, oil shale, and natural gas. As a result of the Administration's action last year to decontrol the price of oil, government subsidies and regulations which reduced production and encouraged oil imports have been abandoned, and free market forces have greatly increased the attractiveness of domestic energy investments.

The Fossil Energy budget request reflects this changing role of the Federal government. The process began last year, when the Fossil Energy budget was realigned to concentrate on long-term, high-risk research and development, while relying on the private sector to demonstrate and commercialize promising individual technologies and processes. This year, the concept of supporting long-term technology development has been further refined. In FY 1983, long-term research and development intended to accelerate the development of advanced technologies will not be conducted, and almost all proof-of-concept work will be left to industry to complete. Again, it is the role of the private sector, responding to free market forces, to support and accelerate advanced technology development. In FY 1983, funds will be applied to more generic research efforts and technology base development. The budget request for these activities is $107 million.

	Budget Authority (in millions) FY 1982	Budget Authority (in millions) FY 1983
Coal	$ 513	$ 91
Petroleum	41	16
Gas	12	--
TOTAL FOSSIL ENERGY	$ 566	$ 107
Less FY 1981 Deferrals/Unobligated Balances	-149	--
TOTAL NEW BUDGET AUTHORITY	$ 417	$ 107

In addition, the sharply reduced FY 1983 Fossil Energy program will require that $45 million in FY 1982 and prior year appropriations be deferred into FY 1983 to pay for the organizational and consolidation costs involved in reducing the number of Energy Technology Centers from five to one or two, terminating active contracts, "mothballing" various Federally-owned pilot plants, and paying reduction-in-force expenses.

The Coal program budget for FY 1983 is $90.8 million. As indicated above, the decrease from FY 1982 funding is due principally to the withdrawal of support for long-term research and development work intended to accelerate the development of specific advanced technologies, and from the termination of almost all proof-of-concept activities. The objectives of the coal program will be to continue generic and technology base research and development and environmental research, and to operate experimental facilities with unique capabilities and pilot plants and test facilities where operation results in net revenues to the Government.

Almost 50 percent of the budget request for coal is devoted to the Advanced Research and Technology Development and Coal Liquefaction programs, with lesser amounts earmarked for work in the areas of coal gasification, fuel cells, environmental control technology and coal preparation, direct combustion, and mining research and development.

The Advanced Research and Technology Development program will continue in the areas of direct coal utilization, liquefaction and gasification processes, and materials and components, so as to provide the necessary data base upon which further coal technology development may be built. The objective of this program is an increased understanding of the fundamental mechanisms of direct combustion and coal conversion to gas and liquid fuels.

The funding for Coal Liquefaction will permit the operation of the methanol-to-gasoline (M-Gasoline) Pilot Plant activity with the Federal Republic of Germany, along with work on catalyst development and evaluations and efforts to mitigate toxic effects of coal liquids.

Fuel cells are a highly efficient, quiet, fuel flexible and environmentally superior method of producing electricity. In FY 1983 the 4.8 megawatt fuel cell test will be continued, and research testing will continue at a decreased level on phosphoric acid and molten carbonate systems. Much of this work is being done on a cost-shared basis with manufacturers, utilities, and industry research organizations.

The surface coal gasification program will concentrate on critical instrumentation and materials work and health and safety studies in coal gasification.

Efforts in combustion systems provide for completion of the planned test program at the International Energy Agency pressurized fluidized bed (PFB) test facility in Grimethorpe, England, as well as PFB technology base support. In addition, research into the utilization of coal-water slurry mixtures will be continued.

Activities in control technology and coal preparation will center on continuation of the effort to develop advanced coal cleaning technologies and the development of processes to remove pollutants resulting from the combustion of coal.

Activities in the Mining Research and Development program will proceed at a very low level in anticipation of the program's transfer to the Department of Interior for consolidation in the Bureau of Mines research program.

The Petroleum program will aid in improved technologies for the exploration, development and production of petroleum resources. The FY 1983 effort will concentrate on enhanced recovery of light and heavy oil, and chemistry and physics work and environmental mitigation efforts in oil shale. In addition, the advanced exploratory research activities which provides generic and fundamental support to all petroleum programs will continue.

The enhanced Gas recovery program is scheduled to be terminated in FY 1982, and therefore no funds are requested in FY 1983.

Conservation, Solar and Other Renewables

The FY 1983 budget request for Conservation, Solar and Other Renewables is as follows:

	Budget Authority (in millions)	
	FY 1982	FY 1983
Conservation............................	$ 202	$ 18
Solar and Other Renewables...............	316	83
TOTAL CONSERVATION AND OTHER RENEWABLES	$ 518	$ 101
Less FY 1981 Deferrals..................	-155	--
TOTAL NEW BUDGET AUTHORITY............	$ 363	$ 101

Conservation

Efficient energy use is being effectively encouraged by rising energy costs and the Economic Recovery Program, thereby permitting a substantial curtailment in Federal conservation programs. The Conservation category contains three programs: Energy Conservation Research; Electric Energy Systems; and Energy Storage Systems. The Energy Conservation Research program funds activities which seek to develop methods and technologies to make more efficient use of energy resources. The Electric Energy Systems program is concerned with the integration of new electric power sources and the reduction of transmission line losses. Energy Storage Systems activities concentrate on improving the utilization of renewable and intermittent energy sources through the development of more efficient, larger scale batteries and other energy storage technologies, including improvements to electric vehicle batteries. The following table details the funding allocation to these programs:

	Budget Authority (in millions)	
	FY 1982	FY 1983
Energy Conservation Research.............	$ 144	$ 18
Electric Energy Systems..................	20	--
Energy Storage Systems...................	38	--
TOTAL CONSERVATION.....................	$ 202	$ 18
Less FY 1981 Deferrals...................	-87	--
TOTAL NEW BUDGET AUTHORITY.............	$ 115	$ 18

Conservation Research activities will concentrate on fundamental research designed to build a technology base that can provide the foundation for future technology development by the private sector.

	Budget Authority (in millions)	
	FY 1982	FY 1983
Buildings and Community Systems..........	$ 48	$ --
Industrial...............................	29	--
Transportation...........................	59	--
Multi-Sector Research....................	8	18
TOTAL ENERGY CONSERVATION RESEARCH.....	$ 144	$ 18
Less FY 1981 Deferrals and Transfers.....	-63	--
TOTAL NEW BUDGET AUTHORITY.............	$ 81	$ 18

In FY 1983, funding will be concentrated in the Multi-Sector Energy Conversion and Utilitization Technology program area. The results of research performed there will be made available directly to the private sector, rather than being utilized by government technology applications programs serving specific end-use sectors, as was the case previously. The market forces which are behind the impressive nationwide conservation efforts render these intermediate technology application activities unnecessary beyond FY 1982.

The $17.5 million in FY 1983 will support basic research that will allow the private sector to improve efficiency and fuel switching capability in the conversion and utilization of energy. Specific areas of research will include heat transfer and fluid mechanics, materials and processes, thermochemical conversion, and electrochemistry.

In the area of heat transfer and fluid mechanics, research will be directed toward heat loss control and the technology base underlying the design of high and low temperature heat exchangers, as well as work in fluid mechanics which is expected to result in specific end-use applications such as advanced heat engines and heat pumps.

The major thrust in materials research will be directed toward high temperature structural ceramics, which have applications in higher efficiency advanced heat engines.

Thermochemical energy conversion research in FY 1983 will be directed toward high efficiency internal combustion engines and home heating equipment.

Basic and applied research and development in the fields of electrochemical storage and conversion should yield information which will lead to improved batteries for automobile propulsion and utility and residential load leveling.

The phase-out of the Electric Energy Systems program commenced in FY 1982 and will be completed with prior year funds in FY 1983 within the Energy Conservation Research program. Research funded in prior years, comprised of contracts and grants to industry, universities, and National Laboratories, will be closed out in an orderly fashion. This program is being phased out in light of the Administration's policy not to support research and development undertaken primarily for the purpose of accelerating the introduction of new energy technologies.

Also in keeping with the Administration's policy, no new budget authority is requested for Energy Storage Systems in FY 1983. Funds appropriated in prior years will be used to bring development of projects previously funded to an orderly conclusion. A modest effort in basic research on electrochemistry and other fields of scientific inquiry that can provide a generic technology base for energy storage is proposed as part of the Energy Conservation Research program.

Solar and Other Renewable Energy

Solar and Other Renewable Energy resources offer the potential for significant contributions toward achieving energy self-sufficiency over the long term. The FY 1983 funding request for these programs totals $83 million.

	Budget Authority (in millions)	
	FY 1982	FY 1983
Solar Energy............................	$ 257	$ 72
Hydropower..............................	3	--
Geothermal..............................	53	10
Geothermal Resources Development Fund....	2	*
Policy and Management...................	1	1
TOTAL SOLAR AND OTHER RENEWABLES.......	$ 316	$ 83
Less FY 1981 Deferrals..................	-68	--
TOTAL NEW BUDGET AUTHORITY.............	$ 248	$ 83

* Less than $0.5 million.

The Administration's policies for solar energy continue the redirection begun last year to place greater emphasis on the private sector, not Federal programs, in developing and commercializing solar technologies. By relying on the marketplace and private industry, it is no longer necessary for the Federal Government to support the development, demonstration or commercialization of solar energy, including R&D undertaken for the purpose of accelerating the introduction of new solar technologies. The free market will determine the development and introduction rates of solar technologies consistent with their economic potential.

No new FY 1983 budget authority is being requested for Active Heating and Cooling, Passive Heating and Cooling, Ocean Thermal Energy Systems, and Solar Information programs.

The aim of federal investment in Photovoltaic Energy Technology is to advance the technical knowledge base so that private industry may develop photovoltaic energy systems capable of making a significant contribution to the nation's energy supply. Federal resources can appropriately be applied to help understand and explain scientific unknowns so the private sector can make sound R&D investment decisions.

The FY 1983 budget request for Photovoltaics is $27 million. The principal activity is Materials Research, which supports research on properties of photovoltaic materials and screening of new materials. Advanced Concepts Research and the Supporting Research and Measurements programs are also conducted to advance scientific understanding and to establish the technology base needed for the private sector to develop and utilize advanced photovoltaic energy systems.

The objective of the Solar Thermal Program is to conduct basic research that will expand the generic technology base of solar thermal energy, thereby allowing the private sector to develop systems capable of meeting the range of energy demands typical of American industry and utilities, including heat at temperatures between 93°C and 1371°C (200°F - 2500°F). Federal support is still justified, based upon the number of technical unknowns. The budget request of

$18.0 million provides for research on materials, thermal sciences, and thermochemistry, and continued operation of the 10 MWe Central Receiver Pilot Plant.

The budget request for the Biomass Program is $6.6 million. The program objective is to conduct long term basic research that expands the technical knowledge base underlying biomass energy feedstock conversion technologies. Private industry can then build upon this knowledge base to develop new conversion technologies that increase the supplies of gaseous and liquid fuels. The FY 1983 program will concentrate on basic research primarily in aquatic systems research, as well as fast pyrolysis, liquefaction, and gasification of biomass feedstocks. Primary areas of study will be the mechanisms and kinetics of reactions and examination of alternative catalysts at the laboratory scale.

The Wind Energy Technology Program is primarily aimed at providing the generic technical base, analytical techniques and test data to allow private sector designers to develop strong, safe and long-lived wind turbines. The budget request for FY 1983 is $5.5 million, and this will be used primarily for modeling related to aerodynamics, structural dynamics, material characterization and fatigue testing, and Darrieus Vertical Axis research.

The FY 1983 budget request provides for an orderly phase-out of Alcohol Fuels R&D activities since they were undertaken to accelerate new technologies, which is no longer an objective of the Administration's energy R&D policy. The FY 1983 request of $3 million will focus on completing current experiments on biochemical conversion.

The budget request for the Solar International Program activity is $9.5 million. This is the final funding request to complete the United States' commitment to the Saudi Arabian Government for work under the Project Agreement for Cooperation in the Field of Solar Energy (SOLERAS). The SOLERAS Program is a five-year, $100 million jointly funded solar energy research and development cooperative agreement between the two governments which was signed in October 1977. The program covers a diverse set of solar technologies and applications, allowing participation by a large group of industrial, academic and research institutions in both countries.

No funds are required in FY 1983 to continue Hydropower activities. The industry has developed very rapidly in the past several years, and further Federal support is not necessary.

The overall strategy of the Geothermal program is to conduct generic and technology base research. This revised federal role assumes that the Federal Government conducts only basic research and development which is beyond the capability of the private sector.

Consistent with this strategy, the FY 1983 geothermal program is structured around three areas: orderly termination of the hot dry rock program, completion of government involvement in the geopressurized resource definition program, and performance of research and development in the areas of geochemistry, geoscience, and energy conversion with particular application to lower temperature resources. The budget request is $9.8 million. Funding for the 50 MWe demonstration projects at Heber, California, and Baca, New Mexico, is not included. The 5MWe Raft River Project will be completed.

The Geothermal Resources Development Fund makes available the financial resources needed to monitor previously guaranteed loans for commercial development of geothermal energy. New loans will not be issued so as to allow the marketplace to more appropriately determine the value of this technology. The FY 1983 budget request is for $75 thousand, which will provide for monitoring of current outstanding loans.

Uranium Enrichment

Uranium Enrichment contains the Uranium Enrichment Activities, Advanced Isotope Separation, and Uranium Resource Assessment programs. The primary activity is the enrichment of uranium to meet domestic and foreign light water reactor requirements and to meet U.S. Government defense requirements. The FY 1983 budgets for the uranium enrichment and advanced isotope separation programs have been structured to enhance the United States' competitive position by reducing costs to the maximum extent possible to minimize future separative work price increases. The following table summarizes the FY 1983 funding request for these programs:

	Budget Authority (in millions)	
	FY 1982	FY 1983
Uranium Enrichment Activities............	$ 1,709	$ 1,930
Uranium Resource Assessment..............	10	3
Advanced Isotope Separation..............	86	34
TOTAL URANIUM ENRICHMENT...............	$ 1,805	$ 1,967
Less Uranium Enrichment Revenues.........	$-1,830	$-2,033
Revenues Forward to FY 1984..............	--	66
TOTAL APPROPRIATION REQUIREMENTS.......	$ -25	$ 0

Uranium Enrichment Activities

The Agency presently enriches uranium to the desired U-235 product assay levels in its gaseous diffusion plants located at Oak Ridge, Tennessee; Portsmouth, Ohio; and Paducah, Kentucky. Those plants were built in the 1940's and 1950's and were operated initially to satisfy defense requirements for U-235. They are now operated primarily to provide enrichment services to domestic and non-United States utility customers. In those plants, the Agency enriches customer-provided natural uranium in the U-235 component for a fee which recovers the cost of providing the services.

The budget request includes funds for power for production of 9.8 million separative work units (SWU), the continued design and construction of the Gas

Centrifuge Enrichment Plant (GCEP) at Portsmouth, Ohio, and other supporting enrichment operations.

The GCEP will provide an additional 2.2 million SWU of enrichment capacity by 1989. The plant will use a technology which requires less than five percent of the power required by the gaseous diffusion technology, and will be significantly less expensive than production from the existing gaseous diffusion plants.

Advanced Isotope Separation

The Advanced Isotope Separation (AIS) program is a long term effort to develop a technology that will provide for the production of enriched uranium at a significantly reduced cost.

Three AIS processess - two laser isotope separation (LIS) techniques and a plasma method - are being investigated as potential candidates for achieving the AIS goals. One of the three processess will be selected for engineering development as soon as an adequate technical basis for evaluation is available.

The primary emphasis for FY 1982 and FY 1983 is the operation of preprototype test beds and the initiation of engineering development. The preprototype test beds will represent technological scale-up beyond the laboratory devices currently used to establish process science parameters.

Uranium Resource Assessment

The uranium resource assessment program is being phased out in FY 1982 primarily because the priority work of the assessment program has been completed, particularly the National Uranium Resource Assessment (NURE) effort; and, based on information gathered to date, the uranium supply looks adequate to support the industry's needs. The requested $3 million in FY 1983 is needed to complete the program's close-out activities. The goals of the program were to assess the nuclear fuel resources of the United States; reduce uncertainties about the extent, availability and economics of domestic and foreign nuclear fuel resources; and make available to industry resource information and technology for use in the discovery and production of uranium resources.

Revenues

The Agency's charges for uranium enrichment services are based on recovery of the Government's costs over a reasonable period of time in accordance with Section 161v of the Atomic Energy Act and with the Uranium Enrichment Services Criteria. The costs of providing enrichment services include the electric power supplied to the enrichment plants, the direct and indirect labor needed to operate the plants, process development, agency administration, depreciation of plant and equipment, and imputed interest on the Government's investment in uranium enrichment.

The FY 1983 estimate for uranium enrichment revenues of $2,032.7 million includes the sale of uranium enrichment services for use in nuclear power reactors for foreign and domestic customers. Also included in this activity are the sale of government enrichment services, advanced payments received from customers, and miscellaneous revenues related to uranium enrichment activities. Revenues from sales to commercial customers are estimated to total $1,923.7 million and revenues from sales to Government customers are estimated to total $109 million.

General Science

The General Science programs explore fundamental principles in the physical and biological sciences through research and experimentation. Basic research is conducted in the High Energy and Nuclear Physics programs, which are administered as national trusts to advance knowledge on the frontiers of science. The mission of these programs is to enhance our knowledge of the basic properties and interactions of atomic nuclei, the constituents of sub-nuclear matter and the fundamental forces of nature. The benefits of these programs are mainly of a long-term nature applicable to all sectors of the economy; however, shorter term spinoff applications in energy and other areas do occur.

Funding for these programs is proposed as follows:

	Budget Authority (in millions)	
	FY 1982	FY 1983
High Energy Physics......................	$ 365	$ 429
Nuclear Physics..........................	134	131
Life Sciences Research and Nuclear Medicine Applications..................	47	39
Program Direction........................	2	2
TOTAL GENERAL SCIENCE..................	$ 548	$ 601
Less FY 1981 Deferrals..................	-5	--
TOTAL NEW BUDGET AUTHORITY............	$ 543	$ 601

High Energy Physics

High Energy Physics is an exploratory field of basic research in which experimental and theoretical studies are conducted on the fundamental building blocks of matter and forces of nature in an attempt to understand more fully the relationships and transformations between energy and matter. The method of achieving the program objectives involves the use of large accelerator facilities to provide various types of high energy particle beams, and sophisticated detection and analysis apparatus to study the particle interactions.

One of the major activities in FY 1983 will be the commissioning and initial operations for research of the Energy Saver Superconducting Synchrotron at Fermi National Accelerator Laboratory. Priority is also given to operation and research utilization of the Positron Electron Project (PEP) Colliding Beam Facility at the Stanford Linear Accelerator Center. There will be a significant accelerator R&D program at Brookhaven National Laboratory on superconducting magnets, which are a high priority need for the future of the U.S. High Energy Physics Program.

The FY 1983 request for High Energy Physics is $429 million.

Nuclear Physics

The long range goals of the Nuclear Physics program continue to be an understanding of the fundamental forces of nature and the interactions, properties, and structures of atomic nuclei and nuclear matter at the most basic level possible. Pursuit of these goals yields a national base of knowledge, techniques, instrumentation, and skilled manpower in critical technologies.

In FY 1983, budget authority of $131 million is requested. Basic nuclear research has a vigorous and growing interaction with particle physics and astrophysics and in FY 1983 these interfaces of nuclear physics will be emphasized. Emphasis also will be placed on expanding research programs at new and upgraded scientific facilities and proceeding with a broadly-based theoretical research program. Also in FY 1983, the funding responsibility for the National Superconducting Cyclotron Laboratory at Michigan State University, $7 million, will be transferred to the National Science Foundation.

Life Sciences Research and Nuclear Medicine Applications

Basic and applied research is undertaken in the Life Sciences Research and Nuclear Medicine Applications program. This program supports new applications of radiation and radioisotopes for the diagnosis and treatment of human disease, and also the transfer of nuclear technology to clinical medicine. Basic biological research is also conducted to study the structure and functions of genetic material, cell membranes, and sub-cellular particles to determine fundamental biological mechanisms to be used as a basis for understanding and estimating energy-related risk to human health. The budget request for these activities is $39 million in FY 1983.

Defense Activities

The primary role of the Agency in Defense Activities is to provide for research, development, testing and production of nuclear weapons and materials in support of Department of Defense requirements. Other responsibilities include management of nuclear waste generated by these activities, as well as naval nuclear propulsion development work, and safeguards and security for nuclear weapons, materials and facilities. Verification of nuclear test treaty compliance and security investigations are also carried out in Defense Activities. The budget request for each activity is as follows:

	Budget Authority (in millions) FY 1982	Budget Authority (in millions) FY 1983
Weapons Activities	$ 2,942	$ 3,408
Materials Production	904	1,077
Defense Nuclear Waste	365	518
Naval Reactors Development	359	376
Nuclear Materials Security and Safeguards	47	47
Verification and Control Technology	50	54
Security Investigations	24	26
TOTAL DEFENSE ACTIVITIES	$ 4,691	$ 5,506

Weapons Activities

The weapons program budget provides for essential efforts required to support the development, testing, production, and lifetime surveillance of safe and reliable nuclear weapons to meet national defense needs. A related effort involving research in inertial fusion is also provided for in this budget because inertial fusion work is relevant to weapons research, particularly with respect to laboratory scale investigation of certain phenomena pertinent to weapons physics.

The following table summarizes the FY 1983 funding request:

	Budget Authority (in millions) FY 1982	Budget Authority (in millions) FY 1983
Research, Development and Testing	$ 1,088	$ 1,192
Production and Surveillance	1,595	2,046
Inertial Confinement Fusion	209	119
Program Direction	50	51
TOTAL WEAPONS ACTIVITIES	$ 2,942	$ 3,408

Research, development, and testing activities in FY 1983 provide developmental engineering support for fabrication of the 8-inch Artillery Fired Atomic Projectile, the W80 warhead for the Air and Sea Launched Cruise Missile, the W81 warhead for the Standard Missile-2, the 155mm Artillery Fired Atomic Projectile, the B83 Strategic Bomb, the W84 warhead for the Ground Launched Cruise Missile, the W85 PERSHING II Missile Air Burst/Surface Burst warhead, and the Missile-X warhead. The budget request of $1,191.8 million is structured to provide a technology base while still being responsive to the near-term needs of development engineering and full scale development.

Weapons testing activities will support development engineering efforts in the laboratories and research and development related to future requirements.

Emphasis will continue to be placed upon the drilling of inventory emplacement holes for future testing and maintenance of the Nevada Test Site at more appropriate levels.

The budget of $118.7 million in FY 1983 for the Inertial Confinement Fusion program supports research and development that will determine the beam energy and target design requirements to achieve high energy gain. The data obtained by experiments accomplished in FY 1983-87 will also provide the basis for weapon physics experiments and measurement of material properties of interest to the nuclear weapons program.

The budget request of $2,046.3 million provides for the production of new nuclear weapons for the stockpile and for the surveillance and maintenance of existing stockpile weapons as approved by the President. Funds are requested for full scale production of eight weapons--the B61 bomb, the W70-3 warhead for the LANCE missile, the W76 warhead for the TRIDENT, the W78 warhead for the MINUTEMAN III, the W79 Artillery Fired Atomic Projectile, the W80-1 warhead for the Air Launched Cruise Missile, the W84 Ground Launched Cruise Missile, and the W85 PERSHING II Missile Air Burst/Surface Burst warhead. Also included is the long lead production effort for the W80-0 warhead for the Sea Launched Cruise Missile, the W81 warhead for the Standard Missile-2, the W82 155mm Artillery Fired Atomic Projectile, the B83 Strategic Bomb, and the Missile-X warhead.

Materials Production

The Materials Production program provides nuclear materials primarily for the national security programs, and also for Agency reactor research and development programs, other government agencies, industries, and foreign governments under civilian international cooperation agreements. The budget request of $1,076.9 million provides for operation of three nuclear materials production reactors and the upgrade of the L Reactor at the Savannah River Plant, South Carolina. Special isotope separation research and development will continue. Third year activities on the conversion of N Reactor at Richland to produce weapons-grade plutonium and on the reactivation leading to restart of the PUREX chemical processing plant will also be supported. The production of high purity plutonium for blending with fuel grade plutonium to produce additional weapons-grade plutonium will be continued. The budget request also provides for expanded efforts in the facilities restoration and reactor safety programs.

Defense Nuclear Waste

The defense waste management program provides for handling and disposal of low-level and airborne radioactive wastes, for storage of transuranic and high-level waste, and for the development and demonstration of technologies for their disposal. The following table shows the request by subprogram:

	Budget Authority (in millions)	
	FY 1982	FY 1983
Decontamination and Decommissioning......	$ 4	$ 13
Interim Waste Operations.................	232	278
Long-term Waste Management Technology....	81	92
Terminal Storage.........................	39	126
Transportation R&D.......................	7	7
Program Direction........................	2	2
TOTAL DEFENSE NUCLEAR WASTE............	$ 365	$ 518

Fiscal year 1983 efforts will upgrade waste handling, storage, and disposal operations by transferring high-level waste from old single-shell tanks at Savannah River and Hanford into new double-shell tanks, construction of new facilities, improvement of facilities, and upgrading of burial ground operations. The long-term program in FY 1983 will focus on processing technologies for high-level waste at Savannah River, and low-level waste technology for Agency sites. The waste form for immobilization of Savannah River waste will be selected. Identification and development of safe and cost-effective applications of radioisotopes and materials recovered from the defense fuel cycle will continue.

The Defense Waste Processing Facility (DWPF) at Savannah River will provide the final step in processing high-level waste for disposal. Facility design will continue in FY 1983 leading to "hot" operations in FY 1990. The DWPF will immobilize the sludge which contains most of the long-lived radionuclides for storage, transportation to, and disposal in a geologic repository. Immobilization and confinement in a geologic repository will ensure the long-term isolation of these wastes from the environment with minimal maintenance and surveillance.

The Waste Isolation Pilot Plant (WIPP), located near Carlsbad, New Mexico, will demonstrate closure of the defense nuclear fuel cycle. The WIPP facilities will be capable of routine operations to receive, inspect, package, and emplace pilot plant quantities of remote-handled high-level and transuranic waste and contact-handled waste in an environment typical of a repository. This research and development facility will be sized to handle quantities typical of defense nuclear waste inventories.

Naval Reactors Development

The Naval Reactors Development program carries out nuclear propulsion development work essential to the U.S. Navy for maintaining the security of the United States. Nuclear propulsion provides the Navy with ships having virtually unlimited high speed endurance, and allows ships to be designed with greatly increased capability for sustained combat operations.

This program provides for the design, development, testing, and evaluation of improved naval nuclear propulsion plants and reactor cores having long fuel life, high reliability, improved performance, and simplified operating and maintenance requirements. The nuclear propulsion plants and cores cover a wide range of configurations varying in size from small submarines to large surface ships. The ultimate objective of the program is to develop reactor cores that will last the lifetime of the ship.

Major programs include a Submarine Test Core; an Advanced Fleet Core which utilizes new concepts which result in longer lifetime; a reactor and propulsion plant for installation in the OHIO Class TRIDENT ballistic missile submarines; an advanced design plant for application in future classes of higher speed submarines; an improved higher power and longer life core for shipboard application; investigation of advanced reactor concepts; and materials and corrosion testing aimed at extending the life of reactor plants and components beyond the original 20 to 30 year design lifetime in support of the Department of Defense policy of extending ship lifetime.

The budget request of $375.7 million for FY 1983 provides for the continuation of current programs. The increase of $16.5 million over the amount requested in FY 1982 is due to cost escalation, refueling of a prototype reactor plant, and advanced core development efforts.

Nuclear Materials Security and Safeguards

The Nuclear Materials Security and Safeguards Program is reponsible for developing measures to assure adequate protection of the Agency's nuclear weapons, nuclear materials, facilities, and classified information against theft and sabotage. The program also focuses on providing safeguards technical support to U.S. and international nonproliferation activities. The FY 1983 budget request for the Nuclear Materials Security and Safeguards Program is $47.4 million.

Verification and Control Technology

This program conducts technical and analytical activities in support of nuclear treaty verification technology and arms control measures. Other activities include analytical support for export control requirements, nonproliferation policy and weapon analysis issues. The FY 1983 request of $53.9 million provides for continued technical, scientific and analytical efforts to support existing and possible future requirements in assigned areas of responsibility.

Security Investigations

The objective of the Security Investigations Program is to help insure that the common defense and security of the United States will not be endangered by the granting of security clearances to all agency and Government contractor personnel who must, in the performance of their work, have access to Restricted Data, National Security Information, or Special Nuclear Material, or who occupy a designated Critical Sensitive position. The Office of Safeguards and Security is responsible for this activity.

The FY 1983 budget request for the Security Investigations Program is $26.0 million, which will provide for approximately 26,000 security investigations. Over 85 percent of all security investigations funded by this activity are for the Agency's contractor employees.

Program Administration

Funding for Program Administration activities is requested for each organization receiving Department of Energy activities. The largest component will provide support for the Energy Research and Technology Administration, and includes the following functions and offices:

	Budget Authority (in millions)	
	FY 1982	FY 1983
Board of Contract Appeals	$ *	$ *
Management and Administration	140	88
Inspector General	8	7
General Counsel	13	4
Office of the Administrator	2	1
Congressional, Intergovernmental and Public Affairs	7	2
Operations Offices	89	62
Miscellaneous Accounts	-19	-11
TOTAL PROGRAM ADMINISTRATION	$ 240	$ 153

* less than $0.5 million.

Management and Administration

These activities provide for the broad range of administrative support services for programs in the Energy Research and Technology Administration headquarters and field operations offices, including salaries and benefits, travel and contractual services. The FY 1983 budget request of $87.5 million will provide for overall management and control of financial resources; organization and administrative management; personnel; procurement; federal assistance agreements; contracting; and equal employment opportunity.

Inspector General

Funding of $7.2 million is requested for the Office of the Inspector General to carry out the provisions of section 208(b) of Public Law 95-91.

General Counsel

Funding of $3.8 million will provide for legal opinions, advice and service to all ERTA programs.

Congressional, Intergovernmental, and Public Affairs

These programs have had the responsibility for developing, managing, and ensuring coordination of Department of Energy relations with the Congress; news media; State, Territorial, tribal and local government officials; other Federal agencies; and consumer, business and citizen organizations. The FY 1983 budget request is $2.0 million.

Operations Offices

The six multi-purpose Operations Offices that manage and execute Headquarters-delegated program and project responsibilities are funded by this activity. The budget request is $62.4 million.

Miscellaneous Accounts

These activities provide for goods sold and services performed for qualified non-ERTA elements, and the revenues associated with those goods and services.

NON-R&D ENERGY FUNCTIONS

In addition to those activities to be administered by ERTA, the Department of Commerce also will be responsible for certain non-R&D energy functions such as energy information collection, emergency preparedness planning, and conservation grant management. The FY 1983 budget request for these activities is $73 million.

	Budget Authority (in millions)	
	FY 1982	FY 1983
Energy Conservation Grants...............	$ 240	$ 4
Emergency Preparedness and Energy Regulation............................	21	9
Bureau of Energy Information............	79	55
Administrative Support..................	23	5
TOTAL NON-R&D ENERGY FUNCTIONS.........	$ 363	$ 73
Less FY 1981 Deferrals and Reappropriations.......................	-185	--
TOTAL NEW BUDGET AUTHORITY.............	$ 178	$ 73

Energy Conservation Grants

	Budget Authority (in millions) FY 1982	FY 1983
State and Local Assistance Program.......	$ 232	$ 4
Multi-Sector Grants......................	8	--
TOTAL ENERGY CONSERVATION GRANTS.......	$ 240	$ 4
Less FY 1981 Deferrals and Transfers.....	-178	--
TOTAL NEW BUDGET AUTHORITY.............	$ 62	$ 4

The FY 1983 request of $4.3 million for Conservation grant programs calls for elimination of funds to State and local governments and elimination of Federal support for appropriate technology and energy-related inventions.

The budget reductions are in response to the fact that, motivated by rising energy costs and substantial Federal tax credits, individuals, businesses and other institutions have been undertaking major conservation efforts. Decontrol of oil prices and the Economic Recovery Program will further stimulate such activities. Public awareness of energy conservation benefits and the high level of private investment in energy conservation clearly show that State and Local grant programs do not warrant further Federal support. Also, continued Federal support for the appropriate technology and energy related inventions projects can no longer be justified in an economic climate so conducive to private support for energy conservation. The request will fund the personnel required for adequate monitoring and termination of activities relating to final grants awarded in the previous years.

Emergency Preparedness and Energy Regulation

Also to be administered by the Department of Commerce are the emergency preparedness activities currently conducted by the Assistant Secretary for Emergency Preparedness, Safety and Environmental Protection and certain energy regulation functions presently carried out by the Economic Regulatory Administration and the Office of Hearings and Appeals.

Emergency Preparedness

The Emergency Preparedness Program is responsible for providing analysis of the nation's vulnerability to energy emergencies, assessment of specific emergency conditions and effects, preparation of emergency response strategies and maintenance of an energy emergency response management structure.

	Budget Authority (in millions) FY 1982	Budget Authority (in millions) FY 1983
Emergency Preparedness....................	$ 10	$ 5

The FY 1983 funding request of $5.4 million will support development of capabilities to assess possible disruptions in energy markets and to formulate appropriate measures for dealing with these disruptions which are consistent with reliance on market forces.

The request will also provide for analysis of national emergency mobilization requirements, formulation of exercises to test the Agency's energy emergency response capabilities, and planning for International Energy Agency Oil Sharing Program requirements. In addition, the Emergency Preparedness Program will undertake a program to assure a reliable power supply, including assessment of the nation's electric system.

Energy Regulation

The FY 1983 request for Energy Regulation is outlined in the table below:

	Budget Authority (in millions) FY 1982	Budget Authority (in millions) FY 1983
Oil and Gas Operations.....................	$ 2	$ 2
Fuels Conversion...........................	5	--
Program Administration.....................	3	1
Hearings and Appeals Activities...........	1	1
TOTAL ENERGY REGULATION...................	$ 11	$ 4
Less FY 1981 Reappropriation..............	-7	--
TOTAL NEW BUDGET AUTHORITY................	$ 4	$ 4

The Oil and Gas Operations program will issue licenses for the import of crude oil and petroleum products and maintain information on domestic crude oil production, as well as international supply. In the natural gas area, the program will prepare analyses of natural gas supply and demand and of the impacts of import/export policy.

The Fuels Conversion Program, established by the Powerplant and Industrial Fuel Use Act of 1978 (FUA), was continued in FY 1982 to facilitate utility powerplant conversion to coal. This is accomplished by providing access, through FUA prohibition orders, to preferential treatment under the Clean Air Act, including relief from the economic penalties that Act imposes. No funding is proposed for the Fuels Conversion program in FY 1983 since it will have accomplished its purpose and should be terminated.

Hearings and Appeals Activities is responsible for assuring the lawful and equitable operation of regulatory processes and mandatory programs by expeditiously processing and resolving petitions for regulatory or other relief. This involves reviewing and deciding exception applications filed by individual firms or persons who believe that agency-issued rules, regulations or orders caused them serious hardship, gross inequity, or unfair distribution of burdens. The other responsibilities presently carried out by the Office of Hearings and Appeals will be transferred to the Department of Justice.

Bureau of Energy Information

The Bureau of Energy Information collects, validates, processes, interprets and disseminates energy information. The Bureau provides essential energy information services to support other energy programs, and prepares regularly scheduled and special purpose statistical, analytical, and short-term projection reports.

	Budget Authority (in millions)	
	FY 1982	FY 1983
Collection, Production, and Analysis.......	$ 50	$ 35
Program Services..........................	21	13
Policy and Management.....................	8	7
TOTAL BUREAU OF ENERGY INFORMATION.......	$ 79	$ 55

The FY 1983 funding request of $54.5 million provides for:

- Maintenance of essential energy information systems to include collection of basic data at the minimum frequencies necessary to capture changes in conditions;
- Preparation of limited, short-term forecasts and reports associated with oil, natural gas, coal, nuclear, electric and alternate fuel sources; preparation of reports associated with energy end use, prices, supply and demand balances, and economic, international and financial matters; and
- Public dissemination of analytical reports, information directories, and public use tapes.

Administrative Support

Funding of $5.5 million is requested for program administration, which will provide for management and administration, legislative affairs, general counsel, international affairs, and policy, planning and analysis services for programs transferred to the Department of Commerce which will not be part of the Energy Research and Technology Administration.

A major reduction in the Office of Policy, Planning and Analysis will be required at the conclusion of FY 1982 to reorient the office toward a more streamlined operation consistent with the market-oriented energy policy of the Administration. The FY 1983 budget request of $1.7 million will support analyses of topics of Congressional and Presidential concern.

The responsibilities of the Office of International Affairs will be transferred to the Department of Commerce and absorbed within its existing ceilings. Program Direction funding of $400,000 is requested in FY 1983 for severance payments for employees.

DEPARTMENT OF THE INTERIOR

The Department of the Interior will be given management responsibility for the Naval Petroleum and Oil Shale Reserves, the Strategic Petroleum Reserve, and the five Power Marketing Administrations. The Department of the Interior (DOI) has management responsibilities for federally-owned natural resources; consequently, it is the logical government organization to manage these energy resources. In addition, DOI had responsibility for the Power Marketing Administrations prior to the creation of the Department of Energy.

The budget request for these programs totals $3,262.2 million.

	Budget Authority (in millions)	
	FY 1982	FY 1983
Naval Petroleum and Oil Shale Reserves...	$ 213	$ 232
Power Marketing Adminstrations...........	523	712
Strategic Petroleum Reserve..............	3,875[a]	2,316[a]
Administrative Support...................	3	2
TOTAL DEPARTMENT OF THE INTERIOR.......	$ 4,614	$ 3,262

[a] Includes oil acquisition and transportation funds of $3,684 million in FY 1982 and $2,074 million in FY 1983 which are off-budget items.

NAVAL PETROLEUM AND OIL SHALE RESERVES

The Naval Petroleum Reserves (NPR) contain the ninth largest known petroleum reserve in the United States, at Elk Hills, California. The legislatively mandated purpose of the Naval Petroleum Reserves program is to produce the reserves at the maximum efficient rate of production. The FY 1983 request of $232.4 million provides funds for continued operation, maintenance, development and production of the reserves, including the drilling of 106 development wells, an exploratory drilling program at Elk Hills, and completion of the pilot phase of the Enhanced Oil Recovery Program at Teapot Dome, Wyoming. The request anticipates that the Federal share of production will be approximately 125,200 barrels per day, with total production projected at 160,000 barrels per day. Gross federal revenues from NPR production are estimated to be approximately $1.7 billion.

The FY 1983 budget request includes $90 thousand for the 145,000 acre Naval Oil Shale Reserves. These funds will support a limited program using existing facilities to monitor environmental changes which may affect future development and to continue land management and maintenance tasks.

POWER MARKETING ADMINISTRATIONS

The Power Marketing Administrations (PMA) sell electricity generated by Federal hydropower projects. Preference for sale of power is given to public bodies and cooperatives. Revenues from selling power and transmission services of the five

PMA's offset annual operations and maintenance costs, repay the capital investment and interest and assist capital repayments on irrigation features of certain projects. The FY 1982 appropriations and 1983 budget authority request for the PMA's are shown below:

	Budget Authority (in millions)	
	FY 1982	FY 1983
Alaska................................	$ 4	$ 3
Bonneville............................	280[a]	455[a]
Southeastern..........................	7	12
Southwestern..........................	21	34
Western Area..........................	211	208
TOTAL POWER MARKETING ADMINISTRATIONS..	$ 523	$ 712

[a] Represents Borrowing Authority estimated to be used during FY 1982 and FY 1983.

The budget request for the Alaska Power Administration decreases to $2.8 million in FY 1983 due to the elimination of the general investigations program. Southeastern Power Administration has a $4.6 million increase to $11.8 million in FY 1983 in order to fully implement its power policies and earn power revenues for deposit to the Treasury. Southwestern Power Administration increases by $13 million to meet contractual commitments and purchase thermal energy for four months of critical-year water conditions. The budget for the Western Area Power Administration decreases to $207.7 million in FY 1983 primarily due to reduced appropriations for energy purchases.

For FY 1982 and FY 1983, the Bonneville Power Administration will continue its operations on the basis of self-financing authority, thus requiring no appropriations. As a result of enactment of the Pacific Northwest Electric Power Planning and Conservation Act (P.L. 96-501), Bonneville's responsibilities have increased to include acquisition of all necessary electric energy resources to serve the utilities who choose to apply to Bonneville for wholesale power supplies. Under the Regional Act, Bonneville is required to treat conservation as the Pacific Northwest's highest priority resource. The FY 1983 budget for Bonneville includes a request that the $1.25 billion in increased outstanding borrowing authority, authorized by Section 8(d)(3) of P.L. 96-501 for conservation and renewable loans and grants, be made available.

STRATEGIC PETROLEUM RESERVE

In December, 1975, legislation was enacted to establish a Strategic Petroleum Reserve (SPR) of up to one billion barrels of oil in order to reduce the Nation's vulnerability to the effects of petroleum supply interruptions. In 1981, the Omnibus Budget Reconciliation Act established an off-budget account for petroleum acquisition and transportation funds.

The development of the government-owned oil reserve is scheduled to achieve a total storage level of 750 million barrels by 1990 in a secure and reliable system capable of crude oil withdrawal of up to 4.5 million barrels per day. The near-term goals include achievement of a cumulative fill of 267 million barrels of oil by the end of 1982.

	Budget Authority (in millions) FY 1982	Budget Authority (in millions) FY 1983
Planning................................	$ 9	$ 8
Petroleum Acquisition and Transportation.	3,684	2,074
Storage Facilities Development...........	171	223
Program Direction.......................	11	11
TOTAL STRATEGIC PETROLEUM RESERVE......	$ 3,875	$ 2,316
Less Off-Budget Petroleum Account........	-3,684	-2,074
ON-BUDGET STRATEGIC PETROLEUM RESERVE..	$ 191	$ 242

New budget authority of $222.5 million is requested in FY 1983 for facilities development, which includes $87.0 million to continue construction of Phase III, $48.8 million to continue Phase II, and $86.7 million for non-phase specific activities. As a result of accelerated leaching of the Bryan Mound caverns and other factors, storage capacity in the near term is being developed faster than previously anticipated. However, deferral of $53 million in FY 1982 funds is being proposed as part of a one year stretch-out of the completion of the 750 million barrel system until 1990. As a result of the deferral, the commencement of longlead procurement, site acquisition, and construction at the Phase III Big Hill site will not begin until FY 1983. This will have no effect on available storage capacity prior to 1987.

The Strategic Petroleum Reserve plans to continue an aggressive oil acquisition program throughout fiscal years 1982 and 1983, with the goal of filling all available storage capacity. This will result in a cumulative fill of 343.1 million barrels of oil by the end of FY 1983, reflecting average daily fill rates of 185,000 barrels in FY 1982 and 209,000 barrels in FY 1983. This aggressive oil acquisition strategy demonstrates that the Administration recognizes SPR's strategic value to the United States as a source of protection from a serious oil supply disruption.

ADMINISTRATIVE SUPPORT

Funding of $1.9 million is requested for program administration, which will provide for management and administration, legislative affairs, power marketing coordination and general counsel services for programs transferred to the Department of the Interior.

DEPARTMENT OF JUSTICE

The Department of Justice will be responsible for administering certain petroleum regulatory activities presently performed by the Economic Regulatory Administration and the Office of Hearings and Appeals. The necessary administrative support for these activities will also be transferred.

PETROLEUM REGULATORY ACTIVITIES

The FY 1983 request for Petroleum Regulatory Activities is $20 million:

	Budget Authority (in millions)	
	FY 1982	FY 1983
Compliance.............................	$ 37	$ 14
Hearings and Appeals Program............	4	4
Administrative Support..................	2	2
TOTAL PETROLEUM REGULATORY ACTIVITIES..	$ 43	$ 20
Less FY 1981 Reappropriation............	-32	--
TOTAL NEW BUDGET AUTHORITY............	$ 11	$ 20

Compliance

The Compliance program is responsible for identifying pricing and allocation violations of the Emergency Petroleum Allocation Act of 1973 (EPAA) and for taking the enforcement actions necessary to obtain redress for overcharges. These alleged violations occurred between the enactment of EPAA in 1973 and the lifting of controls by the President's decontrol order in January, 1981. In FY 1983 the program will focus primarily on litigation of any cases not settled by the end of FY 1982. Major activities planned are:

- Litigate cases before the Office of Hearings and Appeals, the Federal Energy Regulatory Commission, the Federal District Court, and the Temporary Emergency Court of Appeals;
- Conduct special investigations and refer cases to the Department of Justice Criminal Division where evidence of possible criminal violations is discovered; and
- Verify compliance with the terms of settlements reached previously.

Hearings and Appeals

The Hearings and Appeals Program considers and decides appellate and other adjudicatory matters involving enforcement and compliance with the prior mandatory petroleum price and allocation regulations promulgated under the EPAA, in order to close all actions pertaining to those regulations. The Program is also responsible for deciding requests for retroactive exception relief from requirements of the prior regulatory programs which are the basis for related compliance and enforcement proceedings. The goal of the Hearings and Appeals Program is to resolve, by the end of FY 1984, the compliance and related cases that are received by that office during FY 1983.

ADMINISTRATIVE SUPPORT

Funding of $2.4 million is requested for program administration, which will provide for management and administration, legislative affairs and general counsel services for programs transferred to the Department of Justice.

FEDERAL ENERGY REGULATORY COMMISSION

Under the proposed reorganization, the Federal Energy Regulatory Commission (FERC) will become independent and, in addition to its current responsibilities, will assume the natural gas import/export licensing activities of the Economic Regulatory Administration. The Commission is responsible for regulating the national operations of public utilities in order to ensure that businesses and consumers have adequate energy supplies at just and reasonable rates and for allowing fair rates of return to provide incentives for increased production of energy supplies. This includes hydroelectic power, natural gas, oil pipeline industries, and electric power.

	Budget Authority (in millions)	
	FY 1982	FY 1983
Natural Gas Regulation....................	$ 36	$ 43
Hydropower Licensing Regulation..........	16	23
Oil Pipeline Regulation..................	8	7
Electric Power Regulation................	16	19
Other Natural Gas Activities.............	1	1
TOTAL FEDERAL ENERGY REGULATORY COMMISSION............................	$ 77[a]	$ 93[a]
Less FERC Revenues.......................	--	-60
TOTAL APPROPRIATION REQUIREMENTS.......	$ 77	$ 33

[a] Does not include a permanent indefinite appropriation of $85 thousand for Payments to States.

The FY 1983 funding request of $92.5 million is to be offset by $60 million from license fees and other charges. This level of funding will enable FERC to:

- Process the significant growth in hydroelectric applications, and administer an increased dam safety program;
- Perform the Commission's mandated responsibilities under the Natural Gas Policy Act and the Public Utility Regulatory Policies Act;
- Continue the management initiatives aimed at simplifying and expediting the regulatory process and reducing regulatory burden;
- Carry out responsibilities in the electric power and oil pipeline regulation programs;
- Authorize the import and export of natural gas and set curtailment priorities for interstate natural gas pipelines; and
- Progress toward the goal of reducing the pending workload and consolidate Commission operations in one location.

Statistical Appendices

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FEDERAL ENERGY PROGRAMS
FY 1983 BUDGET
(In Millions of Dollars)

	FY 1982		FY 1983	
	BA	BO	BA	BO
ATOMIC ENERGY DEFENSE ACTIVITIES				
INERTIAL CONFINEMENT FUSION				
OPERATING EXPENSES..............	122.4	128.3	105.0	105.0
PLANT AND CAPITAL EQUIPMENT......	86.7	80.3	13.7	26.0
TOTAL, INERTIAL CONFINEMENT FUSION...	209.1	208.6	118.7	131.0
RESEARCH AND DEVELOPMENT AND TESTING				
OPERATING EXPENSES..............	934.3	927.3	1,075.0	1,061.0
PLANT AND CAPITAL EQUIPMENT......	154.0	162.3	116.8	138.4
TOTAL, RESEARCH AND DEVELOPMENT AND TESTING.......................	1,088.3	1,089.6	1,191.8	1,199.4
PRODUCTION AND SURVEILLANCE				
OPERATING EXPENSES..............	1,276.2	1,206.3	1,562.4	1,426.8
PLANT AND CAPITAL EQUIPMENT......	318.3	239.7	483.9	408.6
TOTAL, PRODUCTION AND SURVEILLANCE...	1,594.5	1,446.0	2,046.3	1,835.4
VERIFICATION AND CONTROL TECHNOLOGY				
OPERATING EXPENSES..............	48.9	48.0	52.4	51.0
PLANT AND CAPITAL EQUIPMENT......	1.1	1.1	1.5	1.5
TOTAL, VERIFICATION AND CONTROL TECHNOLOGY........................	50.0	49.1	53.9	52.5
MATERIALS PRODUCTION				
OPERATING EXPENSES..............	598.8	595.8	762.9	745.6
PLANT AND CAPITAL EQUIPMENT......	305.6	293.9	314.0	267.0
TOTAL, MATERIALS PRODUCTION..........	904.4	889.7	1,076.9	1,012.6
DEFENSE NUCLEAR WASTE				
OPERATING EXPENSES..............	245.0	276.6	285.9	281.3
PLANT AND CAPITAL EQUIPMENT......	119.9	117.7	231.9	126.6
TOTAL, DEFENSE NUCLEAR WASTE.........	364.9	394.3	517.8	407.9
NUCLEAR MATERIALS SECURITY AND SAFEGUARDS				
OPERATING EXPENSES..............	43.5	40.8	43.2	43.1
PLANT AND CAPITAL EQUIPMENT......	3.7	3.7	4.2	3.5
TOTAL, NUCLEAR MATERIALS SECURITY AND SAFEGUARDS........................	47.2	44.5	47.4	46.6

FEDERAL ENERGY PROGRAMS
FY 1983 BUDGET
(In Millions of Dollars)

	FY 1982		FY 1983	
	BA	BO	BA	BO
NAVAL REACTORS DEVELOPMENT				
OPERATING EXPENSES...............	277.1	267.4	326.7	347.0
PLANT AND CAPITAL EQUIPMENT......	82.0	68.0	49.0	45.2
TOTAL, NAVAL REACTORS DEVELOPMENT....	359.1	335.4	375.7	392.2
SECURITY INVESTIGATIONS.............	23.6	20.7	26.0	26.0
PROGRAM DIRECTION....................	50.2	50.2	51.3	51.3
TOTAL, ATOMIC ENERGY DEFENSE ACTIVITIES.........................	4,691.3	4,528.1	5,505.8	5,154.9
(OPERATING EXPENSES)...........	3,620.0	3,561.4	4,290.8	4,138.1
(PLANT AND CAPITAL EQUIPMENT)..	1,071.3	966.7	1,215.0	1,016.8

FEDERAL ENERGY PROGRAMS
FY 1983 BUDGET
(In Millions of Dollars)

	FY 1982		FY 1983	
	BA	BO	BA	BO
GENERAL SCIENCE AND RESEARCH				
LIFE SCIENCES RESEARCH AND NUCLEAR MEDICINE				
OPERATING EXPENSES...............	45.4	45.4	37.3	36.9
PLANT AND CAPITAL EQUIPMENT......	2.0	1.9	1.7	1.7
TOTAL, LIFE SCIENCES RESEARCH AND NUCLEAR MEDICINE..................	47.4	47.3	39.0	38.6
HIGH ENERGY PHYSICS				
OPERATING EXPENSES...............	269.2	277.5	331.0	331.0
PLANT AND CAPITAL EQUIPMENT......	95.3	111.8	98.0	95.0
TOTAL, HIGH ENERGY PHYSICS...........	364.5	389.3	429.0	426.0
NUCLEAR PHYSICS				
OPERATING EXPENSES...............	112.4	112.4	113.4	113.2
PLANT AND CAPITAL EQUIPMENT......	21.5	29.6	17.6	19.6
TOTAL, NUCLEAR PHYSICS...............	133.9	142.0	131.0	132.8
HIGH ENERGY AND NUCLEAR PHYSICS PROGRAM DIRECTION..................	1.9	1.9	2.0	2.0
SUBTOTAL,GENERAL SCIENCE AND RESEARCH	547.7	580.5	601.0	599.4
COST OUTLAY ADJUSTMENT............	---	---	---	-10.0
FY1981 DEFERRAL..................	-5.0	---	---	---
TOTAL, GENERAL SCIENCE...............	542.7	580.5	601.0	589.4
(OPERATING EXPENSES)...........	423.9	437.2	483.7	473.1
(PLANT AND CAPITAL EQUIPMENT)..	118.8	143.3	117.3	116.3

FEDERAL ENERGY PROGRAMS
FY 1983 BUDGET
(In Millions of Dollars)

ENERGY SUPPLY RESEARCH AND DEVELOPMENT

	FY 1982		FY 1983	
	BA	BO	BA	BO
SOLAR ENERGY				
SOLAR APPLICATIONS FOR BUILDINGS				
ACTIVE SOLAR HEATING AND COOLING				
OPERATING EXPENSES...............	11.0	56.0	-----	2.0
PLANT AND CAPITAL EQUIPMENT......	.5	3.1	-----	-----
TOTAL, ACTIVE SOLAR HEATING AND COOLING...........................	11.5	59.1	-----	2.0
PASSIVE SOLAR HEATING AND COOLING				
OPERATING EXPENSES...............	10.1	19.2	-----	15.0
PLANT AND CAPITAL EQUIPMENT......	.5	.8	-----	-----
TOTAL, PASSIVE SOLAR HEATING AND COOLING.......................	10.6	20.0	-----	15.0
PHOTOVOLTAIC ENERGY SYSTEMS				
OPERATING EXPENSES...............	70.0	117.5	27.0	49.7
PLANT AND CAPITAL EQUIPMENT......	4.0	5.4	-----	-----
TOTAL, PHOTOVOLTAIC ENERGY SYSTEMS..	74.0	122.9	27.0	49.7
SUBTOTAL, SOLAR APPLICATIONS FOR BUILDINGS......................	96.1	202.0	27.0	66.7
SOLAR APPLICATION FOR INDUSTRY				
SOLAR THERMAL ENERGY SYSTEMS				
OPERATING EXPENSES...............	50.6	75.6	17.6	38.0
PLANT AND CAPITAL EQUIPMENT......	2.3	32.7	.4	2.0
TOTAL, SOLAR THERMAL ENERGY SYSTEMS.	52.9	108.3	18.0	40.0
BIOMASS ENERGY SYSTEMS				
OPERATING EXPENSES...............	19.5	37.4	6.6	8.0
PLANT AND CAPITAL EQUIPMENT......	1.0	1.0	-----	-----
TOTAL, BIOMASS ENERGY SYSTEMS.......	20.5	38.4	6.6	8.0
SUBTOTAL, SOLAR APPLICATIONS FOR INDUSTRY.......................	73.4	146.7	24.6	48.0

FEDERAL ENERGY PROGRAMS
FY 1983 BUDGET
(In Millions of Dollars)

	FY 1982		FY 1983	
	BA	BO	BA	BO
SOLAR APPLICATION FOR POWER				
WIND ENERGY SYSTEMS				
OPERATING EXPENSES...............	33.7	49.4	5.4	16.0
PLANT AND CAPITAL EQUIPMENT......	.7	2.2	.1	-----
TOTAL, WIND ENERGY SYSTEMS..........	34.4	51.6	5.5	16.0
OCEAN ENERGY SYSTEMS				
OPERATING EXPENSES...............	18.3	22.7	-----	10.0
PLANT AND CAPITAL EQUIPMENT......	.5	2.0	-----	-----
TOTAL, OCEAN ENERGY SYSTEMS.........	18.8	24.7	-----	10.0
SUBTOTAL, SOLAR APPLICATIONS FOR POWER.........................	53.2	76.3	5.5	26.0
ALCOHOL FUELS				
PRODUCTION INCENTIVES				
OPERATING EXPENSES...............	-----	-----	3.0	5.0
PLANT AND CAPITAL EQUIPMENT......	-----	-----	-----	-----
TOTAL, PRODUCTION INCENTIVES........	-----	-----	3.0	5.0
TECHNOLOGY DEVELOPMENT AND UTILIZATION				
OPERATING EXPENSES...............	10.0	15.2	-----	-----
PLANT AND CAPITAL EQUIPMENT......	-----	-----	-----	-----
TOTAL, TECHNOLOGY DEVELOPMENT AND UTILIZATION..................	10.0	15.2	-----	-----
SUBTOTAL, ALCOHOL FUELS.............	10.0	15.2	3.0	5.0
OTHER SOLAR ENERGY				
INTERNATIONAL SOLAR ENERGY PROGRAM				
OPERATING EXPENSES...............	4.0	24.2	9.5	8.0
PLANT AND CAPITAL EQUIPMENT......	-----	-----	-----	-----
TOTAL, INTERNATIONAL SOLAR ENERGY PROGRAM....................	4.0	24.2	9.5	8.0

FEDERAL ENERGY PROGRAMS
FY 1983 BUDGET
(In Millions of Dollars)

	FY 1982		FY 1983	
	BA	BO	BA	BO
SOLAR INFORMATION SYSTEMS				
OPERATING EXPENSES..............	6.7	6.7	-----	1.0
PLANT AND CAPITAL EQUIPMENT......	-----	-----	-----	-----
TOTAL, SOLAR INFORMATION SYSTEMS....	6.7	6.7	-----	1.0
SOLAR ENERGY RESEARCH INSTITUTE				
OPERATING EXPENSES...............	----	----	-----	-----
PLANT AND CAPITAL EQUIPMENT......	----	13.6	-----	-----
TOTAL, SOLAR ENERGY RESEARCH INSTITUTE........................	-----	13.6	-----	-----
PROGRAM SUPPORT.....................	3.5	4.0	.5	.5
PROGRAM DIRECTION - OTHER SOLAR ENERGY......................	4.0	4.0	2.1	2.0
SOLAR RESERVE ACCOUNT...............	6.0	-----	-----	2.0
SUBTOTAL, OTHER SOLAR ENERGY.........	24.2	52.5	12.1	13.5
SUBTOTAL, SOLAR ENERGY...............	256.9	492.7	72.2	159.2
GEOTHERMAL				
OPERATING EXPENSES...............	44.2	88.8	9.6	6.6
PLANT AND CAPITAL EQUIPMENT......	9.4	23.3	.2	.2
TOTAL, GEOTHERMAL....................	53.6	112.1	9.8	6.8
HYDROPOWER				
OPERATING EXPENSES...............	3.0	18.3	-----	-----
PLANT AND CAPITAL EQUIPMENT......	-----	-----	-----	-----
TOTAL, HYDROPOWER....................	3.0	18.3	-----	-----
NUCLEAR				
CONVERTER REACTOR SYSTEMS				
OPERATING EXPENSES...............	85.8	92.5	26.0	25.0
PLANT AND CAPITAL EQUIPMENT......	10.5	10.8	6.0	5.0
TOTAL, CONVERTER REACTOR SYSTEMS.....	96.3	103.3	32.0	30.0

FEDERAL ENERGY PROGRAMS
FY 1983 BUDGET
(In Millions of Dollars)

	FY 1982		FY 1983	
	BA	BO	BA	BO
COMMERCIAL NUCLEAR WASTE				
OPERATING EXPENSES	200.7	224.0	70.3	72.2
PLANT AND CAPITAL EQUIPMENT	9.3	13.1	10.2	7.2
TOTAL, COMMERCIAL NUCLEAR WASTE	210.0	237.1	80.5	79.4
ADVANCED NUCLEAR SYSTEMS				
OPERATING EXPENSES	34.8	40.2	28.8	29.3
PLANT AND CAPITAL EQUIPMENT	2.8	2.9	1.8	1.8
TOTAL, ADVANCED NUCLEAR SYSTEMS	37.6	43.1	30.6	31.1
NUCLEAR FUEL CYCLE				
OPERATING EXPENSES	45.6	49.8	52.8	50.6
PLANT AND CAPITAL EQUIPMENT	7.1	8.6	6.5	6.8
TOTAL, NUCLEAR FUEL CYCLE	52.7	58.4	59.3	57.4
BREEDER REACTOR SYSTEMS				
OPERATING EXPENSES	562.9	560.6	541.1	565.5
PLANT AND CAPITAL EQUIPMENT	84.5	141.1	36.4	37.7
TOTAL, BREEDER REACTOR SYSTEMS	647.4	701.7	577.5	603.2
REMEDIAL ACTION				
OPERATING EXPENSES	42.6	38.5	48.9	47.0
PLANT AND CAPITAL EQUIPMENT	.8	2.8	1.4	2.4
TOTAL, REMEDIAL ACTION	43.4	41.3	50.3	49.4
TOTAL, NUCLEAR	1,087.4	1,184.9	830.2	850.5
MAGNETIC FUSION				
OPERATING EXPENSES	292.7	288.2	358.6	350.4
PLANT AND CAPITAL EQUIPMENT	161.1	180.7	85.5	82.1
TOTAL, MAGNETIC FUSION	453.8	468.9	444.1	432.5
ELECTRIC ENERGY SYSTEMS				
OPERATING EXPENSES	20.1	48.1	-----	19.0
PLANT AND CAPITAL EQUIPMENT	.4	2.7	-----	-----
TOTAL, ELECTRIC ENERGY SYSTEMS	20.5	50.8	-----	19.0

FEDERAL ENERGY PROGRAMS
FY 1983 BUDGET
(In Millions of Dollars)

	FY 1982		FY 1983	
	BA	BO	BA	BO
ENERGY STORAGE SYSTEMS				
OPERATING EXPENSES...............	36.9	43.2	-----	18.0
PLANT AND CAPITAL EQUIPMENT......	1.1	2.0	-----	-----
TOTAL, ENERGY STORAGE SYSTEMS........	38.0	45.2	-----	18.0
OVERVIEW AND ASSESSMENT				
OPERATING EXPENSES...............	45.5	49.0	37.5	37.5
PLANT AND CAPITAL EQUIPMENT......	4.0	3.0	1.5	1.4
TOTAL, OVERVIEW AND ASSESSMENT.......	49.5	52.0	39.0	38.9
BIOLOGICAL AND ENVIRONMENTAL RESEARCH				
OPERATING EXPENSES...............	148.4	148.4	118.4	118.1
PLANT AND CAPITAL EQUIPMENT......	13.7	14.7	8.5	9.0
TOTAL, BIOLOGICAL AND ENVIRONMENTAL RESEARCH..........................	162.1	163.1	126.9	127.1
PROGRAM DIRECTION				
OPERATING EXP. - OVERVIEW & ASSES	7.9	7.9	-----	-----
OPERATING EXP. - BIOLOG. & ENV. R	2.9	2.9	2.9	2.9
TOTAL, PROGRAM DIRECTION.............	10.8	10.8	2.9	2.9
BASIC ENERGY SCIENCES				
OPERATING EXPENSES...............	226.3	225.8	261.3	262.5
PLANT AND CAPITAL EQUIPMENT......	17.0	20.0	21.6	18.4
TOTAL, BASIC ENERGY SCIENCES.........	243.3	245.8	282.9	280.9
ENERGY RESEARCH OVERSIGHT,ANALYSIS & UNIVERSITY RESEARCH SUPPORT				
ENERGY RESEARCH ANALYSIS				
OPERATING EXPENSES...............	3.0	5.0	2.6	2.6
PLANT AND CAPITAL EQUIPMENT......	-----	-----	-----	-----
TOTAL, ENERGY RESEARCH ANALYSIS......	3.[illegible]	5.0	2.6	2.6
UNIVERSITY RESEARCH SUPPORT				
OPERATING EXPENSES...............	10.6	10.5	5.1	5.1
PLANT AND CAPITAL EQUIPMENT......	-----	-----	-----	-----
TOTAL, UNIVERSITY RESEARCH SUPPORT...	10.6	10.5	5.1	5.1

FEDERAL ENERGY PROGRAMS
FY 1983 BUDGET
(In Millions of Dollars)

	FY 1982		FY 1983	
	BA	BO	BA	BO
PROGRAM DIRECTION AND OVERSIGHT.....	3.3	3.3	3.2	3.2
SUBTOTAL, ENERGY RESEARCH OVERSIGHT, ANALYSIS & UNIVERSITY RESEARCH SUPPORT...........................	16.9	18.8	10.9	10.9
MULTI-PROGRAM FACILITIES				
OPERATING EXPENSES...............	-----	-----	-----	-----
PLANT AND CAPITAL EQUIPMENT......	32.6	20.0	34.0	28.7
TOTAL, MULTI-PROGRAM FACILITIES......	32.6	20.0	34.0	28.7
IN-HOUSE ENERGY MANAGEMENT				
OPERATING EXPENSES...............	3.9	3.8	1.0	1.0
PLANT AND CAPITAL EQUIPMENT......	19.7	36.8	9.0	9.0
TOTAL, IN-HOUSE ENERGY MANAGEMENT....	23.6	40.6	10.0	10.0
TECHNICAL INFORMATION CENTER				
OPERATING EXPENSES...............	14.5	14.5	8.6	8.6
PLANT AND CAPITAL EQUIPMENT......	1.3	1.3	.3	.3
TOTAL, TECHNICAL INFORMATION CENTER..	15.8	15.8	8.9	8.9
PLANT ENGINEERING AND DESIGN-NON-DEFENSE				
OPERATING EXPENSES...............	-----	-----	-----	-----
PLANT AND CAPITAL EQUIPMENT......	.7	2.6	-----	-----
TOTAL, PLANT ENGINEERING AND DESIGN..	.7	2.6	-----	-----
POLICY AND MANAGEMENT - ER...........	1.0	1.0	.4	.4
POLICY AND MANAGEMENT - EP...........	1.9	1.9	.4	.4
POLICY AND MANAGEMENT - NE...........	1.6	1.6	1.6	1.6
POLICY AND MANAGEMENT - CE...........	.8	.8	.9	.9
SUBTOTAL, ENERGY SUPPLY R & D	2,473.8	2,947.7	1,875.1	1,977.6
TRANSFER FROM SWPA..................	-9.0	-----	-----	-----
FY1981 DEFERRAL(OE).................	-105.7	-----	-----	-----
FY1981 DEFERRAL(P&CE)...............	-36.6	-----	-----	-----
TOTAL, ENERGY SUPPLY R & D...........	2,322.5	2,947.7	1,875.1	1,977.6
(OPERATING EXPENSES)...........	1,973.6	2,400.5	1,651.7	1,785.6
(PLANT AND CAPITAL EQUIPMENT)..	348.9	547.2	223.4	212.0

FEDERAL ENERGY PROGRAMS
FY 1983 BUDGET
(In Millions of Dollars)

FOSSIL ENERGY

COAL

	FY 1982		FY 1983	
	BA	BO	BA	BO
MINING R&D				
OP. EXP. & CAP. EQUIP............	11.0	38.8	1.0	13.8
CONSTRUCTION.....................	-----	-----	-----	-----
TOTAL, MINING R&D..................	11.0	38.8	1.0	13.8
COAL LIQUEFACTION				
OP. EXP. & CAP. EQUIP............	98.8	132.5	26.2	32.1
CONSTRUCTION.....................	129.6	67.1	-----	-----
TOTAL, COAL LIQUEFACTION...........	228.4	199.6	26.2	32.1
SURFACE COAL GASIFICATION				
OP. EXP. & CAP. EQUIP............	53.1	56.2	10.5	27.9
CONSTRUCTION.....................	-----	42.3	-----	-----
TOTAL, SURFACE COAL GASIFICATION...	53.1	98.5	10.5	27.9
UNDERGROUND COAL GASIFICATION				
OP. EXP. & CAP. EQUIP............	8.3	8.5	.7	3.0
CONSTRUCTION.....................	-----	-----	-----	-----
TOTAL, UNDERGROUND COAL GASIFICATION.....................	8.3	8.5	.7	3.0
ADVANCED RESEARCH & TECHNOLOGY DEVELOPMENT				
OP. EXP. & CAP. EQUIP............	52.4	45.4	17.0	25.8
CONSTRUCTION.....................	3.8	9.6	2.8	3.2
TOTAL, ADVANCED RESEARCH & TECHNOLOGY DEVELOPMENT...........	56.2	55.0	19.8	29.0
CONTROL TECHNOLOGY & COAL PREPARATION				
OP. EXP. & CAP. EQUIP............	25.2	30.7	8.6	10.7
CONSTRUCTION.....................	-----	-----	-----	-----
TOTAL, CONTROL TECHNOLOGY & COAL PREPARATION......................	25.2	30.7	8.6	10.7

FEDERAL ENERGY PROGRAMS
FY 1983 BUDGET
(In Millions of Dollars)

	FY 1982		FY 1983	
	BA	BO	BA	BO
HEAT ENGINES AND HEAT RECOVERY				
OP. EXP. & CAP. EQUIP	15.4	20.2	-----	13.3
CONSTRUCTION	-----	-----	-----	-----
TOTAL, HEAT ENGINES AND HEAT RECOVERY	15.4	20.2	-----	13.3
COMBUSTION SYSTEMS				
OP. EXP. & CAP. EQUIP	41.0	43.9	6.5	16.7
CONSTRUCTION	-----	-----	-----	-----
TOTAL, COMBUSTION SYSTEMS	41.0	43.9	6.5	16.7
FUEL CELLS				
OP. EXP. & CAP. EQUIP	34.5	32.2	9.5	10.6
CONSTRUCTION	-----	-----	-----	-----
TOTAL, FUEL CELLS	34.5	32.2	9.5	10.6
MAGNETOHYDRODYNAMICS				
OP. EXP. & CAP. EQUIP	27.8	29.2	-----	7.6
CONSTRUCTION	-----	-----	-----	-----
TOTAL, MAGNETOHYDRODYNAMICS	27.8	29.2	-----	7.6
PROGRAM DIRECTION - COAL	12.0	12.0	8.0	8.0
CAPITAL EQUIPMENT - COAL	-----	-----	-----	-----
SUBTOTAL, COAL	512.9	568.6	90.8	172.7
PETROLEUM R&D				
ENHANCED OIL RECOVERY				
OP. EXP. & CAP. EQUIP	15.4	19.1	5.3	7.6
CONSTRUCTION	-----	-----	-----	-----
TOTAL, ENHANCED OIL RECOVERY	15.4	19.1	5.3	7.6
OIL SHALE				
OP. EXP. & CAP. EQUIP	18.2	20.5	6.3	9.0
CONSTRUCTION	-----	-----	-----	-----
TOTAL, OIL SHALE	18.2	20.5	6.3	9.0

FEDERAL ENERGY PROGRAMS
FY 1983 BUDGET
(In Millions of Dollars)

	FY 1982		FY 1983	
	BA	BO	BA	BO
ADVANCED PROCESS TECHNOLOGY				
OP. EXP. & CAP. EQUIP............	3.6	4.3	3.5	2.2
CONSTRUCTION....................	-----	-----	-----	-----
TOTAL, ADVANCED PROCESS TECHNOLOGY.	3.6	4.3	3.5	2.2
PROGRAM DIRECTION - PETROLEUM......	1.6	1.6	1.0	1.0
CAPITAL EQUIPMENT - PETROLEUM......	2.2	2.5	-----	-----
SUBTOTAL PETROLEUM.................	41.0	48.0	16.1	19.8
GAS				
UNCONVENTIONAL GAS RECOVERY				
OP. EXP. & CAP. EQUIP............	11.5	14.0	-----	10.5
CONSTRUCTION....................	-----	-----	-----	-----
TOTAL, UNCONVENTIONAL GAS RECOVERY.	11.5	14.0	-----	10.5
PROGRAM DIRECTION - GAS............	.4	.4	-----	-----
CAPITAL EQUIPMENT - GAS............	.2	.2	-----	-----
SUBTOTAL - GAS.....................	12.1	14.6	-----	10.5
SUBTOTAL, FOSSIL ENERGY.............	566.0	631.2	106.9	203.0
FY1981 DEFERRAL....................	-149.1	-----	-----	-----
TOTAL, FOSSIL ENERGY................	416.9	631.2	106.9	203.0
(OP. EXP. & CAP. EQUIP.).......	283.5	512.2	104.1	199.8
(CONSTRUCTION).................	133.4	119.0	2.8	3.2

FEDERAL ENERGY PROGRAMS
FY 1983 BUDGET
(In Millions of Dollars)

	FY 1982		FY 1983	
	BA	BO	BA	BO
URANIUM ENRICHMENT				
URANIUM ENRICHMENT ACTIVITIES				
OPERATING EXPENSES...............	1,021.9	1,080.9	1,205.8	1,200.7
PLANT AND CAPITAL EQUIPMENT......	687.2	582.3	724.1	659.3
TOTAL, URANIUM ENRICHMENT ACTIVITIES.	1,709.1	1,663.2	1,929.9	1,860.0
URANIUM RESOURCE ASSESSMENT				
OPERATING EXPENSES...............	9.7	18.2	3.0	3.0
PLANT AND CAPITAL EQUIPMENT......	.3	.3	-----	-----
TOTAL, URANIUM RESOURCE ASSESSMENT...	10.0	18.5	3.0	3.0
ADVANCED ISOTOPE SEPARATION TECHNOLOGY				
OPERATING EXPENSES...............	79.5	81.8	30.3	27.8
PLANT AND CAPITAL EQUIPMENT......	6.2	9.0	3.9	1.4
TOTAL, ADVANCED ISOTOPE SEPARATION TECHNOLOGY.........................	85.7	90.8	34.2	29.2
SUBTOTAL, URANIUM ENRICHMENT........	1,804.8	1,772.5	1,967.1	1,892.2
REVENUES				
OPERATING EXPENSES...............	-1,136.4	-1,206.9	-1,304.7	-1,304.7
PLANT AND CAPITAL EQUIPMENT......	-693.8	-863.3	-728.0	-728.0
TOTAL, REVENUES......................	-1,830.2	-2,070.2	-2,032.7	-2,032.7
REVENUES NOT AVAILABLE...........	-----	-----	65.6	-----
TOTAL, URANIUM ENRICHMENT............	-25.4	-297.7	-----	-140.5
(OPERATING EXPENSES)...........	-25.3	-26.0	-----	-73.2
(PLANT AND CAPITAL EQUIPMENT)..	-.1	-271.7	-----	-67.3

FEDERAL ENERGY PROGRAMS
FY 1983 BUDGET
(In Millions of Dollars)

	FY 1982 BA	FY 1982 BO	FY 1983 BA	FY 1983 BO
ENERGY CONSERVATION RESEARCH				
BUILDINGS AND COMMUNITY SYSTEMS......	47.7	74.7	-----	-----
INDUSTRIAL........................	28.8	48.6	-----	-----
TRANSPORTATION....................	58.9	61.8	-----	-----
MULTI-SECTOR......................	8.4	8.1	17.5	91.2
FEASIBILITY STUDIES...............	-----	3.9	-----	-----
SUBTOTAL, ENERGY CONSERVATION RESEARCH..........................	143.9	197.1	17.5	91.2
FY 1981 DEFERRAL..................	-62.7	-----	-----	-----
TOTAL, ENERGY CONSERVATION RESEARCH..	81.2	197.1	17.5	91.2
NUCLER WASTE DISPOSAL FUND				
NUCLEAR WASTE DISPOSAL FUND..........	-----	-----	185.0	-115.0
TOTAL, NUCLEAR WASTE DISPOSAL FUND...	-----	-----	185.0	-115.0
ALTERNATIVE FUELS PRODUCTION				
ALTERNATIVE FUELS PRODUCTION.........	-----	95.1	-----	-----
TOTAL, ALTERNATIVE FUELS PRODUCTION..	-----	95.1	-----	-----
GEOTHERMAL RESOURCES DEVELOPMENT FUND				
GEOTHERMAL RESOURCES DEVELOPMENT FUND	2.3	2.2	.1	.1
FY 1981 DEFERRAL..................	-.1	-----	-----	-----
TOTAL, GEOTHERMAL RESOURCES..........	2.2	2.2	.1	.1

FEDERAL ENERGY PROGRAMS
FY 1983 BUDGET
(In Millions of Dollars)

	FY 1982		FY 1983	
	BA	BO	BA	BO
PROGRAM ADMINISTRATION				
MANAGEMENT AND ADMINISTRATION........	139.8	138.6	87.5	87.5
MINORITY ECONOMIC IMPACT.............	-----	-----	-----	-----
COST OF WORK FOR OTHERS..............	47.6	47.6	72.0	72.0
MISCELLANEOUS REVENUES...............	-67.0	-67.0	-82.9	-82.9
LEGISLATIVE AFFAIRS..................	1.1	1.1	.3	.3
CONSUMER AFFAIRS.....................	.1	.1	-----	-----
A/S FOR CONGRESSIONAL, INTERGOVERNMENTAL & PUBLIC AFFAIRS.	5.4	5.4	1.5	1.5
COMPETITION..........................	.1	.1	-----	-----
INTERGOVERNMENTAL AFFAIRS............	-----	-----	-----	-----
PUBLIC AFFAIRS.......................	.2	.2	.2	.2
OFFICE OF THE SECRETARY..............	2.1	2.1	.6	.6
BOARD OF CONTRACT APPEALS............	.3	.3	.2	.2
INSPECTOR GENERAL....................	8.1	8.1	7.2	7.2
GENERAL COUNSEL......................	12.5	12.6	3.8	3.9
OPERATIONS OFFICES...................	89.3	89.3	62.4	62.3
SUBTOTAL, PROGRAM ADMINISTRATION.....	239.6	238.5	152.8	152.8
COST OUTLAY ADJUSTMENT............	-----	1.5	-----	-----
TOTAL, PROGRAM ADMINISTRATION........	239.6	240.0	152.8	152.8
TOTAL, DEPARTMENT OF COMMERCE - ERTA.	8,271.0	8,924.2	8,444.2	7,933.6

FEDERAL ENERGY PROGRAMS
FY 1983 BUDGET
(In Millions of Dollars)

	FY 1982		FY 1983	
	BA	BO	BA	BO
ENERGY CONSERVATION GRANTS				
STATE AND LOCAL......................	226.2	499.1	4.3	222.6
MULTI-SECTOR.........................	8.1	14.2	-----	6.9
ENERGY IMPACT ASSISTANCE............	-14.3	12.8	-----	12.0
SUBTOTAL, ENERGY CONSERVATION GRANTS.	220.0	526.1	4.3	241.5
ADD PROPOSED RESCISSION:				
STATE AND LOCAL....................	5.7	4.8	-----	.8
MULTI-SECTOR.......................	14.3	12.2	-----	2.1
FY1981 DEFERRAL....................	-178.1	-----	-----	-----
TOTAL, ENERGY CONSERVATION GRANTS....	61.9	543.1	4.3	244.4
EMERGENCY PREPAREDNESS & ENERGY REGULATION				
COAL UTILIZATION....................	4.8	14.6	-----	3.9
UTILITY PROGRAMS....................	-----	14.3	-----	-----
GASOLINE RATIONING..................	-----	.2	-----	-----
EMERGENCY PREPAREDNESS..............	10.2	10.9	5.4	5.4
PETROLEUM OPERATIONS................	2.0	4.3	1.7	1.7
PROGRAM ADMINISTRATION..............	3.0	3.4	.6	1.5
OFFICE OF HEARINGS AND APPEALS.......	1.0	1.0	1.1	1.1
SUBTOTAL,EMERGENCY PREPAREDNESS & ENERGY REGULATION.................	21.1	48.7	8.8	13.6
REAPPROPRIATION......................	-6.6	-----	-----	-----
LESS PROPOSED SUPPLEMENTAL...........	-----	.8	-----	-.8
TOTAL, EMERGENCY PREPARDENESS & ENERGY REGULATION..................	14.4	49.5	8.8	12.8

FEDERAL ENERGY PROGRAMS
FY 1983 BUDGET
(In Millions of Dollars)

	FY 1982		FY 1983	
	BA	BO	BA	BO
ENERGY INFORMATION ACTIVITIES				
COLLECTION PRODUCTION AND ANALYSIS...	50.4	59.6	34.6	37.1
PROGRAM SERVICES....................	20.5	25.5	13.2	14.3
POLICY AND MANAGEMENT...............	8.0	8.0	6.7	6.9
TOTAL, ENERGY INFORMATION ACTIVITIES.	78.9	93.1	54.5	58.3
ADMINISTRATIVE SUPPORT FOR ENERGY PROGRAMS				
POLICY ANALYSIS AND SYSTEM STUDIES...	14.7	14.7	1.7	1.7
INTERNATIONAL AFFAIRS...............	4.9	5.1	.4	.5
MANAGEMENT AND ADMINISTRATION........	2.3	2.3	2.3	2.3
LEGISLATIVE AFFAIRS.................	.2	.2	.2	.2
GENERAL COUNSEL.....................	.9	.9	.9	.9
TOTAL, ADMINISTRATIVE SUPPORT FOR ENERGY PROGRAMS....................	23.0	23.2	5.5	5.6
TOTAL, DEPARTMENT OF COMMERCE - HQ...	178.2	708.9	73.1	321.1

FEDERAL ENERGY PROGRAMS
FY 1983 BUDGET
(In Millions of Dollars)

	FY 1982		FY 1983	
	BA	BO	BA	BO
NAVAL PETROLEUM AND OIL SHALE RESERVES				
NAVAL PETROLEUM AND OIL SHALE RESERVE..............................	213.1	263.4	232.5	274.5
TOTAL, NAVAL PETROLEUM AND OIL SHALE RESERVES......................	213.1	263.4	232.5	274.5
POWER MARKETING ADMINISTRATIONS				
ALASKA POWER ADMINISTRATION OPERATIONS & MAINTENANCE...........	3.5	3.5	2.8	2.8
BONNEVILLE POWER ADMINISTRATION......	279.7	-55.1	455.0	265.0
SOUTHEASTERN POWER ADMINISTRATION OPERATIONS & MAINTENANCE...........	7.2	6.9	11.8	11.5
SOUTHEASTERN POWER ADMINISTRATION CONTINUING FUND....................	.1	.1	-----	-----
SOUTHWESTERN POWER ADMINISTRATION OPERATIONS & MAINTENANCE...........	21.3	29.3	34.3	34.3
WESTERN AREA POWER ADMINISTRATION OPERATIONS & MAINTENANCE...........	210.8	210.4	207.2	207.2
WESTERN AREA POWER ADMINISTRATION EMERGENCY FUND.....................	.5	.5	.5	.5
COLORADO RIVER BASIN OPERATIONS & MAINTENANCE...........	-----	-2.0	-----	-5.0
TOTAL, POWER MARKETING ADMINISTRATIONS.....................	523.1	193.6	711.6	516.3

FEDERAL ENERGY PROGRAMS
FY 1983 BUDGET
(In Millions of Dollars)

	FY 1982		FY 1983	
	BA	BO	BA	BO
STRATEGIC PETROLEUM RESERVE				
STRATEGIC PETROLEUM RESERVE..........	3,875.4	3,061.9	2,316.2	3,076.6
LESS OFF-BUDGET SPR................	-3,684.0	-2,834.5	-2,074.1	-2,774.2
TOTAL, ON-BUDGET STRATEGIC PETROLEUM RESERVE..................	191.4	227.4	242.1	302.4
ADMINISTRATIVE SUPPORT FOR ENERGY PROGRAMS				
MANAGEMENT AND ADMINISTRATION........	1.2	1.2	1.2	1.2
LEGISLATIVE AFFAIRS..................	.1	.1	.1	.1
GENERAL COUNSEL......................	.2	.2	.2	.2
ASSISTANT SECRETARIES STAFF CONSERVATION.....................	1.0	1.0	.4	.4
TOTAL, ADMINISTRATIVE SUPPORT FOR ENERGY PROGRAMS................	2.5	2.5	1.9	1.9
TOTAL, DEPARTMENT OF INTERIOR........	930.1	686.9	1,188.1	1,095.1

FEDERAL ENERGY PROGRAMS
FY 1983 BUDGET
(In Millions of Dollars)

	FY 1982		FY 1983	
	BA	BO	BA	BO
PETROLEUM REGULATORY ACTIVITIES				
COMPLIANCE	36.7	37.7	13.5	16.0
OFFICE OF HEARINGS AND APPEALS	3.9	4.0	4.4	4.4
REAPPROPRIATION	-31.6	-----	-----	-----
LESS PROPOSED SUPPLEMENTAL	-----	1.5	-----	-1.5
TOTAL, PETROLEUM REGULATORY ACTIVITIES	9.0	43.2	17.9	18.9
ADMINISTRATIVE SUPPORT FOR PETROLEUM REGULATORY ACTIVITIES				
MANAGEMENT AND ADMINISTRATION	.9	.9	.9	.9
LEGISLATIVE AFFAIRS	.1	.1	.1	.1
GENERAL COUNSEL	1.4	1.4	1.4	1.4
TOTAL, ADMINISTRATIVE SUPPORT FOR PETROLEUM REGULATORY ACTIVITIES	2.4	2.4	2.4	2.4
TOTAL, DEPARTMENT OF JUSTICE	11.4	45.6	20.3	21.3

FEDERAL ENERGY PROGRAMS
FY 1983 BUDGET
(In Millions of Dollars)

	FY 1982		FY 1983	
	BA	BO	BA	BO
FEDERAL ENERGY REGULATORY COMMISSION				
OTHER NATURAL GAS ACTIVITIES				
PETROLEUM OPERATIONS.................	.6	.6	.6	.6
TOTAL, OTHER NATURAL GAS ACTIVITIES..	.6	.6	.6	.6
FERC SALARIES AND EXPENSES				
OIL REGULATION.......................	8.1	7.4	92.5	90.0
GAS REGULATION.......................	43.1	40.0	-----	-----
HYDRO REGULATION.....................	12.9	12.3	-----	-----
MULTI-RESOURCE REGULATION............	18.1	17.1	-----	-----
GENERAL REDUCTION....................	-6.0	-----	-----	-----
REVENUES.............................	-----	-----	-60.0	-60.0
TOTAL, FERC SALARIES AND EXPENSES....	76.2	76.8	32.5	30.0
PAYMENTS TO STATES...................	.1	.1	.1	.1
TOTAL, FEDERAL ENERGY REGULATORY COMMISSION.........................	76.9	77.5	33.2	30.7

FY 1982 COMPARABILITY ADJUSTMENTS

The tables in the Budget Highlights document display FY 1982 funds in the structure in which the FY 1983 budget is being requested. For this reason, certain comparability adjustments have been made to the FY 1982 figures as appropriated in order to make them comparable to the FY 1983 request. The table below shows the actual FY 1982 enacted appropriation, a summary of the comparability adjustments, and the new FY 1982 figure on a basis comparable to FY 1983.

There are over 60 individual comparability adjustments which have been made to enacted FY 1982 budget authority. Most of them result from a decision to move certain policy and management and headquarters overhead budgets from Departmental Administration to the program elements they support. This accounts for almost all of the adjustments to the Atomic Energy Defense Activities account and most of the dollar changes to Energy Supply R&D. In the latter account, for example, the Technical Information Center and In-House Energy Management budgets, representing $14.5 million and $19.7 million in FY 1982 respectively, have been transferred from Departmental Administration. Other adjustments from the Departmental Administration account include $25.2 million in uranium enrichment revenues, which in FY 1983 will be offset against budget requirements in the Uranium Enrichment appropriation.

Other comparability adjustments include moving $2.3 million in funds for Emergency Energy Conservation from the Energy Conservation account, where they were appropriated, to the Emergency Preparedness and Energy Regulation account, where activities of this type will be carried out in the future. The $21.4 million adjustment to the Economic Regulation appropriation in favor of Emergency Preparedness merely shows that the account is being retitled.

Finally, certain comparability adjustments have been made between directed energy research programs appropriated in Energy Supply R&D and the more fundamental basic research carried out under the General Science appropriation, to reflect a change in the nature of the work away from energy-specific activities.

FY 1982 DEPARTMENT OF ENERGY APPROPRIATIONS
Comparability Table
($ in thousands)

Appropriations Subcommittees' Jurisdiction Appropriation	FY 1982 Enacted	FY 1982 Comparability Adjustments	FY 1982 Comparable To FY 1983
Energy and Water Development			
Atomic Energy Defense Activities-OE	3,606,351	+13,652	3,620,003
Atomic Energy Defense Activities-PACE	1,066,803	+4,462	1,071,265
General Science and Research-OE	411,060	+12,832	423,892
General Science and Research-PACE	118,300	+510	118,810
Energy Supply Research and Development-OE ..	1,961,926	+11,605	1,973,531
Energy Supply Research and Development-PACE.	332,200	+16,728	348,928
Uranium Enrichment	1,000	-26,383	-25,383
Departmental Administration-OE	200,468	-37,587	162,881
Departmental Administration-PACE	24,963	+3,850	28,813
Other Energy and Water Development..........	601,500	----	601,500
Subtotal, Energy and Water Development ...	8,324,571	-331	8,324,240
Interior and Related Agencies			
Energy Conservation	145,400	-2,330	143,070
Economic Regulatory Administration	21,416	-21,416	-
Energy Regulation	-	+24,077	24,077
Other Interior and Related Agencies.........	4,584,365	----	4,584,365
Subtotal, Interior and Related Agencies ..	4,751,181	+331	4,751,512
Total	13,075,752	-	13,075,752
Less off-budget Strategic Petroleum Reserve	-3,684,000	-	-3,684,000
TOTAL....................................	9,391,752	-	9,391,752

Legend

OE - Operating Expenses
PACE - Plant and Capital Equipment

The **Chairman**. I thank you very much, Mr. Secretary. As you know, there are continuing discussions between various Members of the Congress and the administration with respect to the reorganization of the Department of Energy as has been suggested by the administration. It isn't my purpose this morning to get into that very deeply because that is not the purpose of the hearing; not because I have no interest in that matter. As you would know, I have a very great interest in that matter, but stepping over that for a moment, even though it surfaces in the budget presentation, and does so necessarily I want to focus on some of the budget questions which are somewhat related to the issue of reorganization.

Before doing that, however, I would defer to Senator Heinz if he has any statement he wishes to make before going to the questioning of the Secretary.

Senator **Heinz**. No, Mr. Chairman.

The **Chairman**. Thank you very much. I appreciate the fact that you are here, and that underscores your interest in the subject matter this morning.

First of all, the administration has suggested with respect to the strategic petroleum reserve that the funding be reduced, but do I understand correctly that even though it has been reduced, it is still off budget?

Secretary **Edwards**. That is correct.

The **Chairman**. That doesn't reflect an approval by the administration necessarily, but simply a recognition of what Congress determined the facts to be last year; is that correct?

Secretary **Edwards**. Mr. Chairman, you mean approval of the administration for going off budget?

The **Chairman**. Yes.

Secretary **Edwards**. Mr. Chairman, I don't think the administration objects to that, but it does reflect the actions of the Congress, too.

The **Chairman**. It isn't a matter of policy choice at this point. It is a recognition of what the policy has been determined to be. I share that personal feeling. That is the reason I mentioned it that way. It wasn't my initiative that took it off budget last year, but it was the determination of the majority of this committee and the majority of the Congress.

I am a little concerned about the reasons why we might slow down the purchases for the strategic petroleum reserve and extend the period of time before filling. I wonder if you could comment as to why that was done, particularly in view of the fact that it has been moved off budget?

Secretary **Edwards**. Mr. Chairman, any time that you have an expenditure, whether it is on budget or off budget, it is reflected in the markets, and it is reflected on Wall Street, and we like to keep those expenditures down as low as we can.

However, I might say that we are very proud of our record in the strategic petroleum reserve area.

The **Chairman**. And you have a right to be. I should have prefaced it that way in my question because certainly this administration showed determination to fill the strategic petroleum reserve, and we are not at all unmindful that the fill rate increased dramatically under this administration.

Secretary EDWARDS. Just to reassure you, at the end of 1983, we will have the strategic petroleum reserve filled to its capacity. In 1983, we plan to fill it at the rate of 206,000 barrels a day. In 1982, I think we will fill it at the rate of 185,000 barrels a day; and we will have, at the end of 1983, 343 million barrels in the strategic petroleum reserve, as compared to 110 million barrels that we found last January when we came into office.

Since it is off budget, if the market dictates, we might fill it at a more rapid rate to take advantage of a falling market. I think there are arrangements that can be made so we can do that.

The CHAIRMAN. I am concerned because, indeed, the Congress has been very, very insistent that this program move forward rapidly, and we applaud strongly the action that has been taken to this date. It reflects the administration's commitment, as well, but now there seems to be a slowing in the determination that had been outlined by the Congress and supported by the administration last year.

Secretary EDWARDS. Mr. Chairman, I might point out that we will be filling it at a more rapid rate in 1983 than we did in 1982.

The CHAIRMAN. Not as much as had been outlined?

Secretary EDWARDS. Not that much.

The CHAIRMAN. Does that reflect any reduction or capacity limitations with respect to the capacity of facilities but also the capability to put material in the facilities?

Secretary EDWARDS. We will have it filled to capacity at the end of fiscal year 1983 with 343 million barrels.

The CHAIRMAN. Does that reflect all of the possibility for storage, or can more storage be created?

Secretary EDWARDS. We are continuing to create more storage, and in 1984 there will be more storage created. At the end of 1987 we will have the Big Hill Cavern ready to be filled. We had planned to get 750 million barrels at the end of 1989, and we are presently on schedule.

The CHAIRMAN. Is the capacity a constraining factor with respect to the fill rate?

Secretary EDWARDS. We have coordinated it together so that we are creating new capacity as we have the ability to fill, and so they have to develop together. The plans are on schedule; in fact, they are a little ahead of schedule.

We did postpone the completion of the Big Hill project, but that does not affect us until 1987 when we will be very rapidly approaching the 750 million barrels that we expect in 1989.

The CHAIRMAN. If Congress should restore the amount of money that has been programed for that, in other words, not agree with the cut in the amount of money dedicated to SPRO, would we then have a capacity constraint or could you then continue?

Secretary EDWARDS. We would have a capacity constraint, but we could take some of the funds. I would assume that, if the Congress appropriated more money to purchase oil, they would also be intelligent enough to appropriate money for the construction of the facilities, too.

The CHAIRMAN. We have so far a statutory bar which very carefully distinguishes between the facilities themselves which are on budget and the acquisition funds which are off budget. That requires us to either alter that policy or increase the amount of money in the onbudget portion.

Secretary Edwards. We would have to increase the amount of money on the onbudget portion if we are going to fill it at a more rapid rate than we planned to at present.

The Chairman. If we were to utilize the entire amount of money, which I believe is 1.3 billion, and restore it to the purchase authority, how much more money would be required in facilities appropriation?

Secretary Edwards. Mr. Chairman, I cannot give you that figure right now, but I would be glad to submit it for the record.

The Chairman. If you would do so, please, and I would, I would hope that it could be done fairly promptly.

Secretary Edwards. We will be glad to do that.

[Subsequent to the hearing the Department of Energy supplied the following:]

Relationship of Strategic Petroleum Reserve Oil Fill Rates and Budget Requirements

To increase the SPR oil fill rates to 300,000 barrels per day in the fiscal year 1982–1983 period, would entail purchase of an additional 75 million barrels not provided for in the President's fiscal year 1983 budget, representing further oil costs of $2.8 billion during this period. Whether budget authority for the SPR Petroleum Account would need to be increased by this full amount in fiscal year 1983 would depend on whether the 300,000 barrel per day rate was planned to continue through fiscal year 1984, requiring advance orders in fiscal year 1983 to assure continuity of deliveries.

In terms of facilities funding requirements, we do not believe that an increase in the budget for permanent SPR facilities in fiscal year 1983 would provide the near-term storage capacity to permit a 300 MBD fill rate in 1982 and 1983. Rather, the Department would need to acquire the use of existing private storage on an interim basis. Cost estimates for such storage vary widely from $1–$4 per barrel per year; a $2–$3 per barrel per year range would represent a reasonable estimate for average costs. For a full 75 MMB this would translate into a further requirement for $150–$225 million per year of storage. Fiscal year 1982 and fiscal year 1983 budget authority requirements would depend on the timing and duration of contracting for such storage. Overall, we have estimated interim facilities storage costs of $500–$600 million if a 300 MBD fill rate were to be sustained until cumulative fill of 500 million barrels is achieved.

The Chairman. In your statement you turn to the question of conservation programs, and you make the statement that a major Federal conservation program is no longer necessary.

Does that mean that the energy tax credits section is going to lapse or is it only the direct outlays, direct appropriation programs that have been removed from the budget?

Secretary Edwards. Mr. Chairman, our recommendation is to remove some of the business tax credit for conservation that came from the Treasury. But Mr. Chairman, as you know, there is a tremendous amount of conservation going on today that is driven by the price of energy, and in industry, and in residences and personal lives. There are tremendous amounts of conservation going on.

We have been trying to see how much effect the Government programs and outlays in conservation have had on conservation. We have only been able to trace about 5 percent of all the conservation that goes on in this country to Government outlays.

The Chairman. Do you have a specific report that reflects that research?

Secretary **Edwards**. We can get the figures together. I don't think we have a report per se, but we can get you a few sheets that describe how we arrive at that figure.

[Subsequent to the hearing the Department of Energy supplied the following:]

The attached staff working paper "Effects on Investment in Energy Conservation of DOE's Programs and or Market Forces" provides the information the Chairman was seeking and to which the Secretary was referring.

STAFF WORKING PAPER

APR 20 1981 ✓

Effects on Investment in Energy Conservation of DOE's Programs and of Market Forces

by
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This paper addresses three points relevant to the current policy debate on energy end-use, conservation and the Federal role. These points are: (1) the effects to date of DOE's programs on investment in conservation, (2) the effects to date of natural market forces, mainly higher energy prices, and (3) the likely effect in the future of eliminating Federal programs, relying instead on market mechanisms. Estimating such effects is a complex business analytically, with many varying disciplinary approaches. This paper performs no new analysis, but attempts to summarize what information is available today. Some highlights are:

Effects of Federal Programs (Including Tax Credits)

- The effects to date of DOE's conservation programs ($781 million in FY 80) and tax credits ($620 million in FY 80) on national energy consumption are small, probably accounting for less than 5 percent of the observed reduction in energy use per unit of GNP. The effects on investment in energy conservation, however, may be larger (this is reasoned below), but still less than 15 percent of the total.

- This finding should not be unexpected. Many of the programs were not focused on the present or near-term, but on the longer-range future. Others were not even focused on conservation, but on such areas as emergency planning, energy impact aid and low-income assistance. In general, DOE's programs have focused on areas of alleged market failure where near-term payback, almost by definition, is expected to be marginal. Longer-term payback, however, particularly from R&D programs may be higher.

- Having had little effect on the whole does not mean that Federal programs are ineffective. Detailed cost-benefit analyses have shown that many of these programs are, indeed, cost-effective, some more so than tax credits. If some programs are not, others could take their place. The important issue is whether they are needed.

Effects of the Market (Price)

- The market has responded strongly to energy price signals. Significant energy savings have been achieved both by price-induced changes in consumption patterns (behavioral changes of a curtailment nature) and by investment in energy efficiency improvements. Curtailment actions appear to have dominated the market response to date. Energy efficiency improvements by way of capital investments have had secondary effects only.

- For this reason, the effects of Federal programs (including tax credits) on investment may be larger than their effects on energy consumption. Investment is believed to have accounted for a relatively small part (one-third or less) of the overall market response. To the extent that Federal expenditures have focused primarily on promoting investment rather than on curtailment, their leverage on this type of response may have been greater than on the whole. This area needs study.
- Curtailment of energy consumption, declining labor productivity, lower standards of living and slowed economic growth appear to be the predominant market response to higher energy prices, at least in the near-term (last seven years).
- Technology based energy efficiency improvements have made their largest contributions in two areas, increased fuel economy in automobiles and new plants in industry, but their effects are still of a secondary nature, even in their respective sectors, compared to price-induced curtailment actions.
- Investment in new technologies and turnover or modernization of existing capital stock are inherently much slower phenomena than behavioral decisions to do without. It should not be unexpected, then, that investment has had the lessor effect on the whole to date.

Expectations About the Future

- An energy conservation policy based solely on price will undoubtably reach a large and significant audience of potential investors in energy efficient technology. Whether they are sufficiently motivated by price to invest is a market decision, largely dependent on the cost of capital financing.

- If high interest rates prevail, however, past behavior (the last seven years) will likely continue for some time into the future, that is, higher prices will induce further curtailment and more investment, but curtailment will continue to dominate the response.

- For this reason, additional Federal initiatives aimed specifically at accelerating investment may be desirable. If they are, non-price market incentives (tax credits, accelerated depreciation allowances, etc.) may be warranted. Federal programs (other than tax incentives) may be warranted on similar grounds.

- The existence, a lack thereof, of Federal programs aimed at accelerating investment can have a measurable effect. Their need, however, must be determined on the basis of demonstrated market failures.

- Market failure in the past may have been caused, in part, by Federal price controls and, in part, by a general unfamiliarity with conservation technologies and their potential. These barriers are now being removed. To the extent that some Federal programs were motivated on this basis in the past, a reassessment of their need must now take place.

- Lastly, many questions about the market, its responses, its strengths and weaknesses, and the role for Federal programs and incentives need to be examined more carefully. These are central issues in the current debate and should have priority on any analytical agenda for the coming year.

General Discussion

There is no doubt that the dramatic increases in energy prices since 1973 have had a profound effect on the U.S. economy. Today consumers pay, directly or indirectly, $400 billion a year for energy, 15 percent of GNP, and there is every sign that these costs will continue to rise faster than income in general.

One consequence of higher energy prices, to be sure, is reduced energy use per dollar of GNP. This ratio has declined by 13 percent since prices began to rise sharply in 1973. In earlier years, by comparison, energy and GNP appeared inseparable. As energy prices increase relative to other goods and services, there is a natural and expected market response to use less energy and, if possible, to substitute other goods and services instead.

The economic substitution of capital for energy through innovation, new or improved technologies and retrofit is one type of market response, often referred to as conservation or improved energy efficiency. In general, it means delivering the same energy service or comfort level with less energy and improved efficiency. There is also a second type of market response. This is the substitution of labor for energy or simply doing without. This is often called curtailment, self-denial, changing lifestyles or lowered standards of living. It is also called, confusingly, conservation.

Both types of market responses are operating (data is provided later). In the transportation sector, consumers are buying more efficient cars (improved energy efficiency) and driving less (curtailment). In the residential sector, homeowners are insulating their homes and lowering thermostats. In business, some industries are expanding with modern and energy efficient facilities, others are forced to shutdown. Obviously, millions of individual decisions must be made, many of them difficult ones, and the marketplace is particularly effective in bringing these about.

There is some evidence, however, that higher energy prices acting alone tend to evoke more of the curtailment type of market response than that which improves energy efficiency, especially in the shorter term. Technically speaking, the large increases in energy prices, combined with the pervasiveness of energy use in the economy in general, are believed to have caused a significant change in the preferred structure of the economy. The process of adjusting toward this new optimum has created a high demand for capital, driving upwards its price as well. As the prices of both energy and capital increase, there is a resulting shift in the economy away from both. The real price of labor, meanwhile, has remained constant or even declined slightly. The market response, predictably, is to use more of this input, driving down labor productivity. As labor productivity declines, by most measures, so does the standard of living.

The Effect of DOE's Programs

Although energy consumption per dollar of GNP has risen and fallen at various times in the post-war period, the recent downward trend is a marked departure from historical behavior. The 1980 estimate of 51,400 Btu's per constant (1972) dollar of GNP is substantially below that of any other time in the last 30 years. This reduction roughly translates into about 12 quads of forgone energy use, based on 1973 efficiency levels, or about $60 billion in 1980 energy purchases.

It is unlikely that Federal conservation programs, including tax credits, have had a significant effect at this scale. Most of these programs were intended to serve less immediate purposes. A breakdown of FY 80 expenditures shows where the emphasis has been.

	FY 80 Millions
Grants to Schools and Hospitals and Low-Income Persons	$ 342.7
State Planning Grants	98.8
Transportation (R&D and Info)	113.4
Buildings (R&D and Info)	103.4
Industrial and Multisector (R&D and Info)	79.3
Energy Impact Assistance	43.0
Total DOE FY 80 Expenditures	780.7
Corporate Tax Credits	190.0
Individual Tax Credits	430.0
Total Tax Expenditures	620.0

Approximately 40 percent of the DOE conservation budget in FY 80 was future oriented, focusing on research, development, demonstration and commercialization of high risk technologies. Such programs could have had little effect on either 1980 energy consumption or investment. Another 20 percent was of a planning nature, assisting state and local governments in preparing for energy emergencies, for the development of state energy management plans or for energy impact aid. These programs may have had some effect. The remaining 40 percent was in the form of grants to schools and hospitals and low-income persons for weatherization, intended primarily to offset the negative impacts of higher energy prices on specific segments of society rather than to motivate investment by the private sector. These programs have likewise had little effect on investment at the national scale.

Between 1975 and 1980, perhaps as much as $100 million (accumulated) has been spent on information or so-called outreach programs. These programs were intended to motivate investment and many have been effective. An evaluation of the Energy Analysis and Diagnostic Centers Program, for example, found that $5 of private investment actually resulted from each $1 of Federal outlay, with an additional two dollars planned for future years. Assuming an upper limit of $10 for $1, a total Federal expenditure of $100 million on outreach programs over several years could not have induced more than $1 billion in incremental private investment. Assume, furthermore, that all the other Federal programs induced an additional $1 billion in investment. Together, Federally induced investments above and beyond normal levels may have amounted to about $2 billion from 1975 to 1980. The energy savings resulting from these investments would be about $1 billion per year, or about 2 percent of the total 1980 response.

Residential and business tax credits for energy conservation have also induced investments. Treasury analysts assume only $1 of incremental investment for each $1 of tax credit. Others argue that the very existence of a tax credit stimulates interest in investments much more from a marketing point of view, than from a financial point of view. Conservation tax credit claims are projected for the 1980 tax year to be about $500 million for individuals and $200 million for corporations, implying a total conservation investment in that year of about $4.5 billion. Not all of this investment, however, was induced by the existence of tax credits. Much of it would likely have taken place anyway, without the tax credit. Assuming a $2-for-$1 effctiveness, tax credits may have induced $1.4 billion of incremental investment of the total of $4.5 billion in 1980.

Extending this analysis to tax years 1977, 1978 and 1979 (period affected), perhaps as much as $4 to $6 billion of accumulated incremental investment has been induced by the tax crédits, so far. These investments would return, on the average, about $2 billion in energy savings per year. Adding this $2 billion (due to tax credits) to the $1 billion (due to information and other DOE programs), the combined effect to date would be about $3 billion per year, or about 5 percent of the total 1980 response ($60 billion).

Having had little effect upon the whole, however, is not to say that Federal programs have been "ineffective." The study of the Energy Analysis and Diagnostic Centers program, for example, shows that this type of focused program is two to five times more effective in motivating private investment (per dollar of Federal outlay) than the tax credits.

The real issue, then, is not so much one of effectiveness; less effective programs could always be replaced with more effective ones. Rather, it is whether Federal programs are needed at all, particularly in view of a large and apparently successful market response. This then shifts the focus of the debate, somewhat, away from the specifics of programs and measures of effectiveness, and more toward the market itself, its strengths and weaknesses.

The Effect of the Market

If Federal programs, including those at the state and local level sponsored by the Federal government, account for less than 5 percent of the observed reduction in energy consumption per dollar of GNP, then the market must be responsible for the remaining 95 percent. Further, the apparent energy savings are significant, on the order of 12 quads. In this sense, the market has worked well, in both relative and absolute terms. Such savings could have been achieved only through a large collective response from millions of individuals. Price has undoubtedly motivated these actions and higher prices in the future will motivate even more.

In the context of the general discussion earlier, however, it is important to understand the specific nature of these actions. Some lead to fundamental improvements in energy efficiency, contribute to productivity, advance the Nation's economic growth and reduce future vulnerability to the negative impacts of embargo, disruption and energy price dictums. Others, however, force curtailment of energy use, depress labor productivity, aggravate inflation, change lifestyles, lower standards of living, cause severe deprivation in some segments of society and slow economic growth.

Knowing how much of each type of market response has taken place is relevant to the current debate because Federal programs which advance technology (such as research, development, demonstration and commercialization projects) and non-price market mechanisms which lower the price of capital (such as tax credits, financial incentives and direct assistance) are both targeted exclusively on promoting the first type of market response and obviating the second.

But what evidence is there to suggest how much of which is happening? The following paragraphs assemble some sketchy information on this question for each of three energy end-use sectors: transportation, residential buildings and industry.

In the transportation sector, some insight is gained by examining the case of the passenger automobile. Overall fuel consumption in 1980 was down 25 percent from a level that would have occurred had both travel behavior and automobile technology remained same as in 1973. For 1980 data, the breakdown is as follows:

Decrease in auto travel	9.6	percent
Decrease in travel speed	1.6	percent
Decrease in vehicle size (interior volume)	1.8	percent
Technology Improvements in car MPG	10.2	percent
Improved driver technique and owner maintenance	1.3	percent
Total Reduction below 1973 base case	24.5	percent

Of this breakdown, technology improvements in car MPG (miles per gallon) and better maintenance (tune-ups, tire pressure monitoring, etc) account for about one-half of the observed market response. The rest may be attributed to decrease in travel (reduced service), decrease in travel speed (substitution of personal time for energy) and decrease in vehicle utility as measured by interior volume (smaller cars).

In the residential area, energy consumption per household was about 12 percent lower in 1980 than it was in 1973. This is a significant change, but it is short of the 30 to 50 percent reduction DOE estimates is achievable -- with no decrease in services or comfort provided -- through cost-effective investments, averaging $2000 per household. Moreover, the 12 percent reduction appears to have been achieved largely by curtailment actions, rather than by investments in efficiency.

In gas-heated homes, for example, consumption for space heating was calculated by the American Gas Association to have been about 12 percent lower for the period 1972-1978 than for the period 1967-1972. AGA concluded that a large and variable behavioral component was involved, and that very little investment in retrofit had occurred.

AGA's conclusion is corroborated by other sources. Oak Ridge analysts, using EIA data, found that in 1977-1978 more than half of the U.S. households took no retrofit action. Similarly, IRS data show that only 7.8 percent of all households took advantage of the tax credit for residential conservation measures in 1978; the comparable figure for 1979 was 6.1 percent. The average investment claimed by these taxpayers, furthermore, was about $700, or about one-third the recommended level.

Together, these findings suggest that behavioral actions of a curtailment nature have dominated the residential sector's market response. The fraction of total savings attributable to investment in retrofit over the last seven years is certainly less than 40 percent and may be less than 20 percent.

In the industrial sector, 1980 energy consumption per unit of output (value added measure) was down more than 17 percent from that of 1973 base year efficiencies. Of this, the breakdown is estimated as follows:

Shift in output mix	8.0	percent
Continuation of 1954-1973 trends	6.7	percent
Accelerated improvements in energy efficiency	2.7	percent
Total reduction below 1973 base case	17.4	percent

The first category is a shift in structure of industrial sector output away from energy-intensive industries toward lighter manufacturing. This is believed to have been exogenously imposed on the sector by changing consumer demands away from energy-intensive goods they can no longer afford. The second is improved energy efficiency due to the addition of modern and more efficient facilities under normal growth conditions. These gains are consistent with long-term trends, even in times of declining energy prices. The third is accelerated energy efficiency, above and beyond normal trends, resulting from investment induced by higher prices.

The price induced response, therefore, is estimated to be that of the changed output mix, plus any accelerated energy efficiency improvements observed since energy prices began to rise sharply in 1973. Of the total market response in the industrial sector, less than one-fifth (2.7 percent of 17.4 percent) is attributed to accelerated investment in energy efficiency improvements.

Summary of Market Effects

In summary, the market has responded strongly and, perhaps, predictably to higher energy prices. It has not necessarily responded optimally from a policy point of view. Energy consumption has been reduced by as much as 12 quads from 1973 base year efficiency levels. This response is dominated by price-induced behavioral actions of a curtailment nature: reduce driving, lowered thermostats, non-heated rooms, changing consumer demand for industrial output and others. It has also depressed labor productivity, lowered standards of living, changed lifestyles, slowed economic growth, aggravated inflation, and caused severe deprivation in some segments of society. This type of market response can be expected to prevail for some time into the future and will likely become more prevalent as prices continue to rise faster than income.

The large reductions in energy use per unit of GNP are not the result, primarily, of investments in technology. Of that portion of energy savings attributed to increased price, less than one-third and, perhaps, less than one-fifth, is due to investments in improved energy efficiency. Of these investment-type of responses, turnover of stock in the passenger automobile fleet and additions of new plants in industry appear to have contributed the most so far to improved energy efficiency; retrofit in industry and housing, the least.

Future Effects of Eliminating Federal Programs

In the longer-term, although not yet apparent from the experience of the last seven years, curtailment may give way to investment. Investment in new technologies and turnover or modernization of capital stock are inherently much slower phenomena than sudden decisions to simply do without. It should not be unexpected, then, that investment has had the lesser effect on the whole to date.

If high interest rates on capital prevail, however, investment in energy efficiency improvements will proceed even more slowly. Acceleration of investment, consequently, may be desirable. It has been linked to economic revival, improved labor productivity and the return to rising standards of living. If such arguments are convincing, then policy mechanisms could be installed in ways that are most effective for each sector or activity in the economy. Non-price market incentives such as investment tax credits and accelerated depreciation allowances, may be appropriate for some sectors. Federal programs, rather than market incentives, may be more appropriate in others, particularly in the areas of identified market failures or where tax-related incentives are not applicable.

If acceleration of investment is an objective, then presumably the best ways of achieving it can be found. Increased energy prices are beneficial means toward this end. Tax credits, if one believes the Treasury analysts, would appear to be somewhat ineffective, having low leverage (1:1 or 2:1) on incremental private investment per Federal dollar. Some DOE programs, if one believes the DOE analysts, would appear to be much more effective than tax credits, having higher leverage ratios, 5:1 or better.

While DOE programs have had little apparent effect on national energy consumption to date (less than 5 percent of observed savings), primarily for reasons of focus in time and purpose, they may have had a larger effect on investment. DOE's programs have focussed primarily on investment, hence, whatever impact they might have had on the whole may be attributed primarily to the investment portion. If the investment response is less than one-third of the whole, DOE's 5 percent of the whole may actually be 15 percent of the one-third.

A national energy conservation based solely on price, or on both price and non-price market incentives combined, without Federal programs, will likely reach a large and significant audience of potential respondants. The future effects of such a policy, however, are difficult to know. In general, the extent to which capital investments can be encouraged as energy prices rise, the more rapid the transformation of existing capital stock to new optimums and the less difficult and prolonged the period of adjustment.

The existence, or lack thereof, of Federal programs targeted on this objective can have a measurable effect on the rate of private investment. Whether or not Federal programs are advisable would appear to depend more on the issue of market failure and need, rather than on the issue of effect or effectiveness. If Federal action of one form or another is desired, then a subsidiary issue becomes important, that is, determining which programs or measures are more effective than others, per dollar of Federal outlay, whether they be program budget items or "tax expenditures."

Lastly, the marketplace is now in transition. Energy prices, in particular, have risen dramatically again in 1979 and 1980, oil has been decontrolled and natural gas price controls are gradually coming off. It is difficult to know whether market failures in the past will continue to be market failures in the future. Clearly, however, a thoughtful understanding of the market, its responses to price, its strengths and weaknesses, is a fundamental prerequisite to policy analysis. To this end, these issues should have priority on any analytical agenda for the coming year.

The CHAIRMAN. I am concerned about it for two or three different reasons. One is that conservation is thought by many to hold a great promise for us, and I agree conservation is important. I think it is sometimes overstated, but nevertheless, it can also be understated. It has a contribution that can be made.

If financial incentives, either by way of tax credits or by direct expenditure, have measurable results, I would like to know how you have measured them and how various programs translate into conservation results. I am concerned because of the effect upon energy consumption, concerned because of the specific program levels in our budget. I am concerned because the Bonneville Power Administration in the region where I live has programed $400 million to be expended in exactly that area. I am concerned finally perhaps because of the basic policy consideration. It seems to indicate that all energy choices are simply economic ones so far as our Government is concerned, and that is something that I find a little difficult in accepting, where our dependence upon imported petroleum has such a great impact upon our economy, upon our security, upon our domestic and foreign policies. There are reasons for noneconomic choices.

It doesn't seem to me that we are addressing that question outside of the sheer energy and economic policy choices, and conservation, if indeed there are marginal choices to be made that would reduce our dependence even though they are slightly uneconomic, may still have some reason for us in terms of policy. It doesn't seem to me that this is being addressed in the budget.

Secretary EDWARDS. Mr. Chairman, conservation is working very well, and it is driven, in our opinion, by the price. Just to put it in proper perspective, we have conserved almost as much oil in the past 3 years as we have discovered in new proven reserves, so conservation is extremely important. There may be things other than the price that drive conservation—a feeling of patriotism, that type of thing—but basically I feel that price is the motivating factor in conservation.

The CHAIRMAN. It will be the only motivating factor if the market is allowed to be the only reason. But that simply ignores the contribution that might be made by conservation in reducing the energy imports. I guess that is a matter of basic concern that I have with respect to energy policy for our country as it is developing over the last year or more.

Secretary EDWARDS. Mr. Chairman, this study which we did is a study of the Federal programs from 1973 to 1980, and this is a study of the increase in efficiency in the private sector. We have found it was 95 percent attributable to the price increases and not to anything that had been done beyond that. I haven't really looked into whether it is a very outstanding study or not, but most of the studies are in question these days. We will certainly get that study to you so you may have it available.[1]

The CHAIRMAN. If you would, I would appreciate it. I have a number of other concerns I would like to direct your attention to. I will not take the time at this point to do that because I want to share the time with others. I am concerned about the same kind of test—the market test, for the development of some other marginal technologies that simply won't quite move on the marketplace but still with some Federal assistance and some concern, might make measurable contributions to our energy supply and thus reduce our dependence upon foreign oil.

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[1] See p. 671.

I remember far too vividly the problems we had in 1973 to 1974, at the time of the embargo, and again when the Shah of Iran fell and we saw the price of oil double. There is, therefore, some very real reasons that impact upon our economy to reduce our dependency that allows foreign cartels to dictate price to us.

I understand why they are doing it, and I am not castigating them so much as I am questioning our own policy that allows them to continue to have that kind of influence on our markets. Certainly economic choices in 1975 and 1976 did not reflect what happened in 1977 with the doubling of the price of oil. Purely economic choices made today in the marketplace may not anticipate future events in any greater measure than they did in that period between 1974 and 1977, and we may indeed be penny-wise and pound-foolish as we seek to reduce Federal expenditures in areas where we could reduce the likelihood that they will have that kind of leverage in the marketplace.

I am concerned in a number of these areas, but I will not belabor that subject at this point. With one final question, I will then turn to Senator Heinz. As I recall, the latest installation on solar photovoltaics has been completed. If I recall the figure correctly, that installation cost $15,000 per kilowatt of installed capacity. Is that figure correct?

Secretary EDWARDS. Mr. Chairman, I cannot verify it or deny it, but we will provide it for the record—that is the latest estimate of photovoltaics?

[Subsequent to the hearing the Department of Energy supplied the following:]

Recent lowest costs for federally installed photovoltaic projects just completed are $18,000 per peak kilowatt (kWp) of installed capacity for the 225kWp concentrating system at the Phoenix International Airport and $22,000/kWp for the 135kWp flat plate system on the Oklahoma City Science and Arts Center. Avoidance of first of a kind engineering and design charges could reduce the cost of duplicate systems by as much as 15 percent.

The CHAIRMAN. And I think the same thing was roughly true with respect to the cost figures for the installation of Barstow. Could you provide for me the cost figures on those two programs?

Secretary EDWARDS. They are extremely high, I know, but whether they are that high or not I do not know.

[Subsequent to the hearing the Department of Energy supplied the following:]

The estimate for Barstow is that it will cost approximately $12,000/kWp, including one time only design expenses.

The CHAIRMAN. Thank you very much.

Senator Heinz.

Senator HEINZ. Senator McClure, thank you. Secretary Edwards, I note in your budget document, page 32, that you propose to zero out the State and local assistance conservation program, mainly the weatherization program. Is that correct?

Secretary EDWARDS. That is correct, yes.

Senator HEINZ. Mr. Secretary, it is well known that ever since the Energy Department took over the concerted administration of that program, that performance has been steadily improving. Indeed, I held hearings in the Aging Committee up in Erie, Pa., just last Friday, and in that area they have been spending an average of $450 per home on weatherization. With that small expenditure, they are averaging a 25- to 30-percent reduction in the amount of energy consumed for the elderly and the poor people.

The proportion of their income spent on energy ranges from 25 percent to as high as 35 or 40, in some cases 50 percent, and my question is this. In view of the undeniable need of poor and elderly for the weatherization assistance and the steadily improving performance of this program, how do you defend elimination?

Secretary EDWARDS. Senator Heinz, as you know, the Department of Health and Human Services in 1982 had $1.7 billion for low-income home energy assistance; 15 percent of that could be used for weatherization. In 1983, they have $1.3 billion, which really gives them about $262 million in 1982 and Congress gave DOE $144 million in 1982. In the Department of Housing and Urban Development, there are activities that permit some of these funds to be used for weatherization; in 1982 they had $3.5 billion. In 1983 they have the same amount, $3.5 billion.

Senator HEINZ. Of what programs?

Secretary EDWARDS. In HUD, the community development block grant program; they are permitted to use that for weatherization. There are also funds available in the Farmers Home Administration and REA that can be used for weatherization. We have tremendous resources in this country going to social services, and I think that that can be better handled by Health and Human Services or Housing and Urban Development than it can in our Department. We are not oriented in that direction, and they are, so that was the reason for our zeroing them out in our Department.

Senator HEINZ. Mr. Chairman, you correctly point out that the low-income energy assistance program is proposed to be funded at $1.4 billion in fiscal 1983.

Secretary EDWARDS. One point three.

Senator HEINZ. In 1983; how much do you think that program is being funded at this year?

Secretary EDWARDS. After this year?

Senator HEINZ. During this year; what do you know the funding of that program to be this year?

Secretary EDWARDS. I understand there is $1.875 billion.

Senator HEINZ. That is correct if you add into that to the roughly $144 or $150 million in weatherization that you have administered this year. The total program comes to something over $2 billion for low-income energy assistance and weatherization.

What you are saying is that that program should in total be cut, leaving aside CDBC for the moment, that total program should be cut from $2 billion to $1.4 billion. Now just a week and a half ago the Senate virtually unanimously voted in favor of more money for the low-income energy assistance program. We know that that program is totally inadequate as it is. It was originally authorized by Congress in excess of $3 billion. We can supply you with example after example even though I know it is an HHS responsibility of needs that are not frankly being met, and it seems to me that it is extremely difficult to justify a $600 million cut in total in a program, in addition to which I would ask you, given the fact that community development block grants serve urban areas—in the State of Pennsylvania we have 303,250 people who live in rural areas—what is going to help them?

Secretary EDWARDS. Senator, I think that is one of the things that our social services should work out. About a third of this country's resources, I believe, go to social services. I do not think it is something that the Department of Energy can handle as well as Health and Human Services can. If the Congress feels that we need more money in that Department, certainly that is the preogative of the Congress; and I certainly don't object to it. I think that, if you put in 10 times as much money as they have in now, it still would not totally answer the need. There is a need for so many things in the world. Certainly we want to take care of our elderly and poor and our sick, and I think this country probably is doing that better than any country in the history of mankind. We all want to be compassionate, but I still think, and we feel, the administration feels, that that should be handled by HUD and Health and Human Services, not the Department of Energy.

Senator HEINZ. Well, let's for the sake of argument, accept your rationale that this is going to be an HHS responsibility. I don't necessarily buy that. We haven't agreed to your reorganization plan as yet even though the budget that you have submitted does assume that.

Let me ask you this philosophical question. Given the fact that many of these households are paying 30 or 40 percent, in some cases 50 percent of their income to the gas company, the fuel oil dealer, their energy supplier, do you think that a weatherization program aimed at these people is good national policy?

Secretary EDWARDS. I think it is good national policy if we can afford it, Senator.

Senator HEINZ. If the alternative is for us to continue to increase payments to these people so that they have to turn those payments over for fuel consumption when a modest expenditure could economize on those payments, I get a little puzzled when I hear your answer. It seems to me that conservation is a very good investment. How can these people conserve without a weatherization program of some kind?

Secretary EDWARDS. Senator, there are all sorts of ways to conserve. I imagine they can conserve the same way everyone else conserves.

Senator HEINZ. How is that?

Secretary EDWARDS. I quit heating my entire house. All sections are heated at 70°. We have gone out and weatherized the house. They need to weatherize theirs; and maybe if they can't afford it, Health and Human Services or HUD can help them do that.

Senator HEINZ. On Wednesday of last week, I was in Blair County, Pa., a rural area of our State. They found an 80-year-old lady who had done exactly that. She had turned off all the heat in her house. The only thing she had keeping her alive was an electric blanket. It was 10° below outside. It was 20° above freezing in her house. Had they not found her, they were lucky to do so, today she would be dead.

Is that your idea of conservation?

Secretary **Edwards**. Senator, you know that is not my idea of conservation. I have read stories of millionaires who died in poverty and starvation with a big chunk of money under their mattress. You cannot pick out one instance like that.

Senator **Heinz**. I will give you another instance. On the same day——

Secretary **Edwards**. You cannot pick out two instances like that and set national policy.

Senator **Heinz**. Let me explain. Maybe you don't understand.

Secretary **Edwards**. Senator, I probably understand what the difficulty is a lot more than you understand.

Senator **Heinz**. I don't know.

Secretary **Edwards**. I have been there.

Senator **Heinz**. You come from South Carolina. I know you have got some hill country.

Secretary **Edwards**. I have got some poor country, too.

Senator **Heinz**. I do not know.

Secretary **Edwards**. I don't believe you can tell me about hard times. I understand them.

Senator **Heinz**. Mr. Secretary, I think I can talk about that as well as anybody because, unknown to you, I can. In any event, Mr. Secretary, on Thursday I visited the home of a couple. He had had a stroke. She has a circulatory problem. They cannot turn the thermostat down below 70°. You would turn their thermostat down. Now you say these are two examples. I suggest to you they are two examples out of hundreds of thousands, perhaps out of millions in this country, and I think it is very important that you understand this since you are a policymaker in this area.

Secretary **Edwards**. I still say, Senator, that I think the policy should be that Health and Human Services and HUD should handle all those programs along that line that have to do with compassionate care for those who need it and those who are sick and ill and maimed. We certainly all want to take care of them. I do not think that is an issue.

Senator **Heinz**. My time has expired so I will just make this closing comment. You have been responsible for running this program. You are, therefore, up until this moment responsible for the evaluation. You at this point are our leader in this area. I understand you don't want to be our leader in this area, and that was a decision we will face up to when we look at the reorganization, but as the person who is responsible for the administration of this program, for its evaluation, I think you owe the Congress your candid evaluation of it, whether or not you want to continue to have it, and your evaluation that you have given me today seems extremely flawed and insufficient.

Thank you, Mr. Chairman.

Secretary **Edwards**. Might I ask the Senator, Mr. Chairman, what you would recommend that we do?

Senator **Heinz**. What I would recommend is that you look at the program and tell us whether you think it is working, how it could be improved, and whether you think it is valuable. Instead you have simply dodged the question and said that is going to be an HHS responsibility.

Up at this moment, it is your responsibility because you are running the program.

Secretary **Edwards**. We will run it as efficiently and effectively as we can so long as you appropriate the money.

Senator **Heinz**. Thank you, Mr. Chairman.

The **Chairman**. Senator Bradley.

Senator **Bradley**. Mr. Secretary, some of these points have been covered by the chairman, but since we have a similar interest, I would like to go over them in some greater detail.

Why have you reduced funding for purchasing oil from the strategic petroleum reserve by $1.6 billion?

Secretary **Edwards**. Senator Bradley, we have a balanced program that I think will build the strategic petroleum reserve. I would like to fill the whole thing, 750 million barrrels, tomorrow if we could do it. I think it would create problems for us as a nation economically.

Senator **Bradley**. What would? Filling it?

Secretary **Edwards**. Filling it that rapidly.

Senator **Bradley**. What would be the problem?

Secretary **Edwards**. I think that whether it is off budget or on budget, when the——

Senator **Bradley**. What is the problem with filling the strategic petroleum reserve when there is a glut in the world market?

Secretary **Edwards**. There is no problem at all if you have the money and can afford it, Senator. We are filling it much more rapidly in 1983 than we did in 1982, and much more rapidly than it was filled the years before we got to town.

Senator **Bradley**. Your fill rate is what now?

Secretary **Edwards**. In 1982, 185,000 barrels a day.

Senator **Bradley**. What do you project it could be in 1983?

Secretary **Edwards**. Two hundred six thousand barrels.

Senator **Bradley**. What do you assume to be the price of oil?

Secretary **Edwards**. Senator, I do not know what we can assume to be the price of oil.

Senator **Bradley**. You have to make an assumption if you are going to say fill at 206,000 barrels a day. What is the assumption of what the price is?

Secretary **Edwards**. We can assume in 1983, assume the price is $37.39 a barrel.

Senator **Bradley**. If it is less than $37, that means you will be buying more oil, won't you?

Secretary **Edwards**. That is correct.

Senator **Bradley**. Is your restraint only the funds to purchase the oil?

Secretary **Edwards**. Senator, we will have some restraint on capacity at the end of 1983. We will have, at the rate we plan to purchase, the total capacity filled at the end of 1983. We will have 343 million barrels of capacity at the end of 1983.

Senator **Bradley**. So you are saying there are two constraints. One constraint is that the money is not there to buy the oil, and second constraint is that you don't have a place to put the oil if you bought it? Is that right?

Secretary **Edwards**. Of course, if you insist on giving us more money, we can build more capacity to store oil and we can buy more oil; but we feel like this is a rather well balanced program, particularly as you relate it to what has gone on heretofore.

If you would like to speed the fill rate and have us fill more capacity, if you can get it past Congress, we will be glad to fill it to whatever capacity you would like to have it filled.

Senator **Bradley**. Given the likelihood of an oil supply disruption, your assessment is that it is more important to spend $220 billion on defense than it is to spend $3 billion on filling the oil reserves, is that correct?

Secretary **Edwards**. That is the administration's position.

Senator **Bradley**. Do you agree with that?

Secretary **Edwards**. Yes; I agree with that at this stage.

Senator **Bradley**. So carrying that logic out, what we are preparing to do with the defense budget is to intervene to protect the oilfields as opposed to filling the oil reserves to a maximum level to protect our country against economic damage that would result from a loss of oil through another disruption? Is that not a correct leap here?

Secretary **Edwards**. I think that to some extent you could interpret the budget that way.

Senator **Bradley**. Yes. OK. Thank you. Why should we wait for another salt dome to be made ready? What aboveground storage or excess oil tankers? What are the costs of storing oil that way since we are in a glut?

Secretary **Edwards**. Senator, we have looked at it. I don't like to use that term "glut," by the way. I would like to use the term "sufficiency;" it really isn't a glut. We have looked at aboveground storage, and we have concluded that, because of the price and the maintenance problems——

Senator **Bradley**. What is the average carrying cost for storing a barrel of oil in the salt dome versus in aboveground storage?

Secretary **Edwards**. The carrying cost per year you mean? I believe it is about 20 cents a barrel, but I would like to confirm that figure.

Senator **Bradley**. Twenty cents a barrel; you're sure that is the carrying cost, not the construction cost?

Secretary **Edwards**. That is purely carrying cost. We can get any figures that you would like along that line and submit it for the record.

[Subsequent to the hearing the Department of Energy supplied the following:]

Oil Storage Costs

For the 750 million barrel SPR underground system, storage facilities development costs are now projected to be approximately $3.33 per barrel in real 1981 dollars; the marginal costs for development of a new site is higher, over $4 per barrel in 1981 dollars, with the marginal cost for expansion of existing sites is $2.30 per barrel in 1981 dollars. For steel tank development, the Department estimates capital costs of $9-$10 per barrel in 1981 dollars.

Carrying costs, including interest charges for oil and facilities capital investment will vary with oil prices and interest rates. Converting the current costs for spot market purchases of Arab light oil to 1981 dollars and assuming a public sector interest rate of 14.7 percent, an annual cost of approximately $4.75 per barrel in 1981 dollars would be experienced in government underground storage. Using steel tank storage and a private sector borrowing rate of 18 percent, a $7 per barrel annual cost in 1981 dollars would be experienced, but the after-tax carrying cost could be approximately half this amount. The opportunity cost of this capital investment to the private sector would depend on the profits a particular firm could obtain from an alternative investment.

Standby operations and maintenance costs after completion of oil fill may be approximately equivalent for underground storage and steel tanks, and would add approximately $.05-$.10 per barrel per year in 1981 dollars

Senator **Bradley**. Do you think private companies are going to be willing to absorb this cost as they look at the possibility of another disruption, private companies building stock, where the carrying cost is $20 a barrel per year?

Secretary **Edwards**. I do not think the carrying costs are as much a problem to the private companies as the construction cost to build the storage originally.

Senator **Bradley**. What is happening in private stocks now? Are they increasing or decreasing?

Secretary **Edwards**. They are decreasing slightly. The last time we had about 400 million barrels in private stocks. That is in the United States. Regarding other countries, at a meeting of the International Energy Group, in Paris, we urged them to build their stocks; and they are, in fact, building their stocks, each individual company.

Senator **Bradley**. So the rest of the countries are building their stocks, but we are depleting our stocks?

Secretary **Edwards**. We are not depleting our stocks.

Senator **Bradley**. You said the private sector is depleting their stocks.

Secretary **Edwards**. It is normal at this time of year to deplete your stock somewhat because this is the time of year when the extreme cold pulls down the stocks. The cost of money, Senator, has had an effect on the economic situation; the availability of oil in the market has had an effect on it. Normal business activity dictates to some of these companies that they, in fact, sell off some of their stock that they have in inventory.

Senator **Bradley**. The carrying cost per year that you have given me is somewhat startling. You said $20 per barrel?

Secretary **Edwards**. Twenty cents per barrel; that's big enough.

Senator **Bradley**. Well, how do you figure that?

Secretary **Edwards**. I don't know. Let me ask my budget analyst here to tell me how we figure that. We would like to provide that for the record, Senator.[1]

Senator **Bradley**. Let's do a rough rule of thumb. A rough rule of thumb is the interest rate times the value of the oil. It is a 10-percent interest rate times the value of oil. That is what your cost is, and I think if you put the pencil——

Secretary **Edwards**. We are not talking about the same thing. I am talking about the cost of maintenance of the strategic petroleum reserve. I am not talking about the interest on the money now and all that.

Senator **Bradley**. What I am interested in is the carrying charge; the national interest is to have as much oil as possible in stock. Now in addition to the depletion of the private stocks because it is the time of the year that the stocks are depleted, there is a question as to whether the stocks are not being depleted because the interest rates are so high, which is the carrying charge of the stocks, and if you are deciding that you are going to cut the strategic petroleum reserve precisely at the time that stocks are being cut because the carrying charge has increased, I think we ought to know that.

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[1] See p. 688.

Secretary **Edwards**. Senator, we are not cutting the strategic petroleum reserve. We continue to build the strategic petroleum reserve.

Senator **Bradley**. You are spending less money, $1.6 billion less money on the purchase of oil for the strategic petroleum reserve than you did last year, and this is precisely at a time where there is more oil available on the world market than in recent years.

Secretary **Edwards**. We will have a fill rate that is more rapid in 1983 than it is in 1982, although we are spending less money, because we have 69 million barrels.

Senator **Bradley**. Are you aware of the legislative minimum fill rate that was set by Congress?

Secretary **Edwards**. 100,000 barrels.

Senator **Bradley**. 125,000 barrels, in the Energy Security Act; the appropriations bill, the minimum rate was 300,000 barrels a day, which you have never achieved certainly in the administration and before you never achieved, but the fact is that because you do marginally better this year than last year in the fill rate doesn't mean that you are at the optimum level given the threat to this economy of an oil supply disruption. I think you ought to be aware of that. I think the chairman's questions earlier illustrated his own concern about this oversight, to be generous, on the part of the administration. This is going to be an issue that is going to come up again and again, and the answer I think to this committee is going to be that we are doing a little better than we did last year.

Now let me move on. Emergency preparedness has the SPR. Under the reorganization of DOE, emergency preparedness goes to Commerce, but the SPR which is the central component, goes to the Department of the Interior.

Does that make any sense? Who is in charge of emergency preparedness?

Secretary **Edwards**. Senator, under the proposal as written, the policy would be going to Commerce, and the natural resource which the strategic petroleum reserve has——

Senator **Bradley**. Does that make any sense, that Commerce who is in charge of the emergency preparedness doesn't control the central tool of emergency preparedness which is the strategic petroleum reserve?

Secretary **Edwards**. Senator, we are not final in our recommendation there, and the steering committee just met recently and we discussed that situation.

Senator **Bradley**. You are flexible?

Secretary **Edwards**. I am sort of on your side on that issue, and they have decided to perhaps move the whole thing over into the Commerce Department.

Senator **Bradley**. One last question—I appreciate that flexibility.

Secretary **Edwards**. We are pretty flexible all the way around.

Senator **Bradley**. Now one last question; another part of emergency preparedness is what do you do if you don't have enough oil in stockpile when there is a disruption? As you know, the administration and I disagree on this point. We think the market ought to allocate the oil. The Congress, however, in its wisdom, has disagreed, and there is now coming out of a conference committee an Emergency Petroleum Allocation Act bill. I think it will be on the floor of the Senate tomorrow or the next day. It will probably pass after some extended debate. The question is does the President intend to sign this monstrosity that simply reimposes price controls or the possibility of price controls after they have proven to be an utter failure? Is the President going to support this and sign this, or is he going to uphold the free market here?

Secretary **Edwards**. Senator, I don't speak for the President, but——

Senator **Bradley**. You are his chief adviser in the area of energy.

Secretary **Edwards**. Once again, you and I are not in too much disagreement on this issue.

Senator **Bradley**. Is the President going to sign it or not?

Secretary **Edwards**. Senator, I cannot tell you that. I don't make those decisions for the President.

Senator **Bradley**. What are you advising him to do?

Secretary **Edwards**. I haven't sent him any recommendation yet.

Senator **Bradley**. Will you?

Secretary **Edwards**. Yes; I will.

Senator **Bradley**. Will you say you are more on my side than his side?

Secretary **Edwards**. I believe so.

Senator **Bradley**. You can strike the record. I don't think you want to be on the record saying that.

Thank you very much.

Secretary **Edwards**. For a member of the opposition party, you're pretty smart.

Senator **Bradley**. Some of your best friends are here.

Secretary **Edwards**. It's a strange world. I'm going around the country bragging about how we have improved the strategic petroleum reserve, and I come here and catch the devil for what we are doing.

Senator **Bradley**. If you're looking for a compliment, I will tell you that you are doing a heck of a lot better job than the Carter administration, but my thought is you can do better than you are doing, and the country I think can be better served if you do better than you are doing.

Secretary **Edwards**. Together we will work on that problem and try to get it filled as rapidly as we can, as much as we can, so we can have a good supply.

Senator **Murkowski** [presiding]. There has certainly been a spirited discussion, Mr. Secretary. I don't want to prolong the discussion that is taking place over the strategic petroleum reserve, but I, too, have some concerns about the reduction of approximately $1.6 million as very, very significant. My question to you, Mr. Secretary, is do you think that the OPEC countries are going to see this reduction as a falling of the commitment that our Government has made to try and use the strategic petroleum reserve as a buffer in case there is a reduction in OPEC production for one reason or another? Specifically, in regard to the firm position that we have had to live by our commitments to fill the reserve on schedule, can't we now see this as a step backward? How is that going to look in the eyes of the OPEC nations in your opinion?

Are they likely to try and take advantage of this as a lack of fulfillment of the commitment?

Secretary EDWARDS. Senator, with the market price that the OPEC nations have today since we deregulated oil, I think the OPEC nations would like for us to buy as much oil as we can to fill this reserve. I really do, at this stage. They have been having market problems of their own.

Senator MURKOWSKI. A price reduction of $2 a barrel.

Secretary EDWARDS. Some of it has taken place, and there are reductions. That is one thing that I think is very interesting. Let the free market work. It really does meet our needs, and the consumer gets the benefit of it. I really think that, originally, some of the members of OPEC expressed some concern about our taking oil out of their land and putting it in our land for this purpose. We just flatly said it was a necessity; and once we made that decision, we had no more complaints from them.

I do not know what their reaction will be to this. I really do not think it is that severe a reduction.

Senator MURKOWSKI. It is $1.6 billion.

Secretary EDWARDS. $1.6 six billion? There is no question that we want to be as prepared as we can in the case of disruption. However, if you think it should be filled more rapidly, certainly the Congress has the privilege of putting more money in the budget and instructing us to do so.

Senator MURKOWSKI. The committee, as you know, has had some spirited debates on the concept of how you fund the reserve, whether you do it off budget or on budget, and I don't think we want to open up that particular mess again, but my major concern is whether or not we are likely to see a situation of them taking advantage of this lack of commitment. You have indicated in your best estimate you don't think that will occur.

Secretary EDWARDS. They have enough problems of their own beyond this.

Senator MURKOWSKI. You have recommended that the fuel conservation program established under the Federal Use Act be terminated. I believe that there is no funding for this purpose.

I am wondering if you considered asking for other changes in the Fuel Use Act? I know in our State particularly we have some utilities that are prohibited from building new gas-fired facilities even though natural gas is the cheapest, most plentiful, certainly the cleanest form of energy available, and I personally feel that the Fuel Use Act should be amended. I am wondering if you are contemplating such a change?

Secretary EDWARDS. We certainly hope that that will be amended so that the economics of the situation will dictate what energy source is to be used rather than the Federal regulations.

Senator MURKOWSKI. Can you give us some idea of when you would anticipate this occurring or these recommendations coming?

Is it going to be submitted by your Department on behalf of the administration?

Secretary **Edwards**. Senator, we have been preoccupied with other things. If the President decides to recommend the deregulation of natural gas, I imagine it will accompany that piece of legislation.

Senator **Murkowski**. Do you have any opinions at this time on what you are going to recommend to the President with regard to the Fuel Use Act and exceptions from it?

Secretary **Edwards**. We have already recommended at the Cabinet council that the restriction on the use of natural gas in the Fuel Use Act, incremental pricing, be removed.

Senator **Murkowski**. All right, so the timeframe then is pretty much up to the administration. Do you have an idea when that might occur?

What I am getting at, since leadtime is so crucial in these projects, is to try and find out when they might anticipate this matter being addressed so that it can be resolved one way or another.

Secretary **Edwards**. If the administration for some reason decides not to recommend the deregulation now, there may be a possibility we could break away that part.

Senator **Murkowski**. Do you mean to separate it from deregulation?

Secretary **Edwards**. Separate it from the more controversial aspect; I agree with you. I think it is necessary to do so.

Senator **Murkowski**. Do you anticipate maybe by the second quarter of this year to do so?

Secretary **Edwards**. I do not like to set a timetable for this administration.

Senator **Murkowski**. How does it become a high-priority item as far as what would appear to be the most logical way to break it out of deregulation as a specific exception? How mechanically does that occur in the process?

Secretary **Edwards**. Senator, I do not see any problem in breaking it out if the administration wants to break it out. However, I think that if we are going to deregulate natural gas, that decision is made. If we break that out, we may lose some support for deregulation of natural gas.

Senator **Murkowski**. Deregulation of natural gas may be a very volatile matter. There are a lot of pros and cons on that, and you have indicated, at least my understanding is you have indicated, that it might be logical to break this portion out. I would agree with you, and I would like to see that be done, and I am just urging——

Secretary **Edwards**. We do not want to lose any support for the more volatile issues, Senator.

Senator **Murkowski**. Then I can only conclude that the likelihood of it being separated in view of your comments is rather remote from the standpoint of the momentum that the administration feels is necessary to consider deregulation. Is that right?

Secretary **Edwards**. Pardon me, Senator. I was talking when I should have been listening.

Senator MURKOWSKI. My concern is how do we get from here to there basically? Do we have to wait for deregulation before we can take this matter up?

Secretary EDWARDS. There are certain administrative reliefs that we can give you. If you have a specific case, we would be glad to try to work on it with you.

Senator MURKOWSKI. On a specific case-by-case basis, that would be satisfactory.

Thank you, Mr. Secretary. Senator Bumpers.

Senator BUMPERS. Mr. Secretary, in this budget for nuclear fission, you decrease it by 6 percent, and by contrast, conservation R. & D. and conservation grant programs are reduced 93 percent, and the solar programs are reduced 62 percent, and the fossil fuels program is reduced 81 percent. That is a virtual elimination of everything in the budget except for fission.

Now in addition to that, we have $252 million in here for the Clinch River breeder, and you say in your testimony that you expect the long-term best interests of this country will be left to the private sector. I will come back to the Clinch River breeder in a moment because the private sector has already pulled out of it.

When would you expect the private sector to pick up solar, conservation, fossil fuel development? When would you expect them to move into this area?

Secretary EDWARDS. Senator, the private sector has moved into solar to some extent already. I think they are doing a pretty good job there. There are many more companies building and installing solar equipment than there were just a few years ago, but we have to get back. To start with, on this nuclear budget, about 70 percent of that budget is dictated by the Congress as to how it will be spent—waste management, that type of thing, remedial action; waste management excludes, by the way, the nuclear propulsion programs and the uranium enrichment programs.

Senator BUMPERS. Let me just contrast that. I will accept what you are saying. I am not sure that is true. Let me just contrast that with the Clinch River breeder, as you could also say it was dictated by Congress, but it was also asked for by this administration, and there is $252 million which I understand DOE wants to start breaking ground for even before its license, and my question is considering the fact that the industry agreed initially to a 50-50 split on the Clinch River breeder, and it is my understanding that the utilities of this country have collected about $115 million through various authorizations of public service commissions to put up their part of the money, but they now say that since President Carter wanted to terminate it, that breached their contract and they are no longer obligated to put up anything and don't intend to put up anything, or if they do, it will be a rather minimal amount.

Now if the private sector is no more interested than that in fusion, I mean about the Clinch River breeder, how can you be sure that they are going to be red hot about solar and conservation and fossil fuels?

I might say that, for instance, the Germans and the Russians already have breeders, nothing exotic about the technology except we know the Clinch River technology is a turkey.

Secretary **Edwards**. I am not sure that the Clinch River technology is a turkey.

Senator **Bumpers**. The consulting engineer said it was a turkey and they ought to get out of it.

Secretary **Edwards**. You can get consulting engineers to tell you anything.

Senator **Bumpers**. This surfaced as an inhouse memo, but that's old history around here.

Secretary **Edwards**. Because the previous administration killed the Clinch River, postponing it for years and years and years, the private sector got burned. It cost the private sector about $100 million. They were ready.

Senator **Bumpers**. It has cost us $900 million. Out of the billion dollars that has already been put in the Clinch River breeder, we put up $900 million of that. Their contribution has gone down steadily every year since 1974.

Secretary **Edwards**. That is because of Government interference and postponement by the previous administration.

Senator **Bumpers**. This administration is totally committed to it and yet the industry has not come back into their contribution.

Secretary **Edwards**. Once they have been burned, it is hard to convince them that they ought to get back into it.

Senator **Bumpers**. Why should we? We were burned twice.

Secretary **Edwards**. I think it is very clear that the Reagan administration is in favor of supporting breeder reactor technology.

Senator **Bumpers**. I have no objection to that.

Secretary **Edwards**. If you want it now, then I guess the other thing is, how do you approach, how do we move ahead to develop it? We used to be first in nuclear technology and breeder technology. Now all the foreign countries have taken our technology, gone to their shores, and now they are No. 1. We are about fourth or fifth in nuclear technology today. Time and time again we have lost sales of nuclear reactors to foreign countries based purely on the fact that we are looked upon as not a reliable provider of technology any more. We have lost sales to the French. The French have a dynamic breeder reactor going. They are moving into the second phase of the breeder reactor. They have found answers and started buying waste. They are looked upon in the international market as the country that has the best, most advanced technology available, and they are leaders in the world.

Now every time we lose a sale of a nuclear reactor to France——

Senator **Bumpers**. I applaud every time we lose a sale. I applaud.

Secretary **Edwards**. There are 30,000 people today who do not have jobs that are not applauding that.

Senator **Bumpers**. That's the worst reason I can think of for proliferation of nuclear reactors around the world.

Secretary **Edwards**. Senator, I think nuclear reactors have a great place in the future of world energy supply. When we run out of oil and gas and coal, what are we going to do?

Senator **Bumpers**. We are on the Clinch River now, Mr. Secretary. Here is a report from your own Energy Research Advisory Board dated November, 1981.[1]

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[1] The report "Federal Energy R. & D. Priorities," appear in app. V, p. 830.

Secretary **Edwards**. That was the day before the vote in the Senate. Yes, sir. I remember that.

Senator **Bumpers**. This is your own Energy Advisory Board. On a scale of 1 to 16 the Clinch River breeder is 14th. Why do you insist on flying in the face of a report like that?

Secretary **Edwards**. Senator, the Clinch River breeder reactor was a logical next step. We had bought millions of dollars worth of equipment which was waiting to be installed. We were well on our way, and it made sense to go ahead with the Clinch River breeder reactor as a logical next step, and I think we ought to move vigorously ahead with the follow-on large development project after that if we are going to recapture the technological leadership that we deserve to hold in the world.

Senator **Bumpers**. I don't want to keep hammering away at that. Temporarily my side has lost the argument on that. I am assuming we are going to go ahead with it. I would like to move to another area. Of course, I feel very strongly that this administration's Achilles' heel really is in its energy policy. I should say lack of energy policy, but I used to be in the cemetery business and I got out because it is difficult to sell lots to healthy people, and it is difficult to get people's attention in the country to the fact that we are losing a million acres of arable land every year and at some point we are not going to be able to feed ourselves, but that is not the here and now, and that won't account for the evening news today so you are not going to get very much attention around here, and right now, gasoline prices are falling slightly and even though people can't afford to pay their heating bills, they see the gasoline prices going down and they know that the world production exceeds world demand for the moment, but let me ask this question.

If the OPEC cartel met tomorrow and decided to cut their production by 5 million barrels a day which they could certainly do, how would you suggest the United States, that we cope with that?

Secretary **Edwards**. Senator, we would have some difficult times coping with that.

Senator **Bumpers**. Did you see the GAO report that said we are in no better condition right now than we were in 1973 to cope with an embargo?

Secretary **Edwards**. I think we would have to challenge that GAO report on the grounds we are in a much better position than we were in 1973 to cope with a cutoff. All the GAO reports are not necessarily the gospel.

Senator **Bumpers**. We would have a tough time, though, wouldn't we?

Secretary **Edwards**. There is no question about that. I never said we are energy independent. I am saying that we are working in that direction. You are talking about the poor folks having a hard time paying bills. This administration did not create that increased price. Between 1978 and 1979, the price went up 130 percent. That is when you had price and allocation mechanisms in place and the Government was running the show and everything, according to some people's philosophy, would be rosy. That is when the price went up the most. Since we have freed the market and tried to do some of these things that the administration believes in, we have had a decrease in price. There may be a little decrease in the real price of gasoline, but we have at least had some stability in the market around the world today. In this country, we have been going downhill since 1970 in proven reserves in oil. Since the deregulation has taken place, we can see that line is flattening out. As of last June, the line started flattening out, and we are beginning to see a comeback. We have seen so much activity around this country.

Senator **Bumpers**. Jim, the American Petroleum Institute says our production will be down 500,000 barrels by 1990, regardless of what we do.

Secretary **Edwards**. That study has been challenged, too.

Senator **Bumpers**. Everything is challengeable, of course. What is the long-range interest of this country? We all know, and you know, that what we are living on is finite resources, and we are going to run out, and yet the Government is withdrawing from every sensible alternative that we need to get cracking on right now, and I just say that makes no sense to me.

Secretary **Edwards**. Conservation is working, if you are considering that as an alternative. Direct funding is not going to help that much in conservation programs.

Senator **Bumpers**. Mr. Chairman, on conservation, let me ask one question if I may. This is a followup of Senator Heinz. If you want to talk about who is poor, I will get to that. The bathroom caught on fire when I was a kid, and of course, it never reached the house.

Your statement here, you say that there is clear evidence that the marketplace is responding favorably to higher energy prices. Oil price decontrol and the President's economic recovery proposals will accelerate this trend. Therefore, further Federal expenditures for energy conservation grant programs will be unnecessary.

Mr. Secretary, I see a slight contradiction, and I would like you to explain to me how high energy prices make low-income weatherization programs unnecessary.

Secretary **Edwards**. Senator, you are misinterpreting what I said. I didn't mention low-income weatherization.

Senator **Bumpers**. I know that, but that is a conservation program.

Secretary **Edwards**. I said low-income weatherization programs should be handled by Health and Human Services or HUD, not by the Department of Energy. I am not against those programs. Once again I say the prices didn't go up on my watch that much; the prices have come down on my watch.

Senator **Bumpers**. Not heating prices.

Secretary **Edwards**. Heating prices have come down, too, on my watch.

Senator **Bumpers**. Natural gas——

Secretary **Edwards**. Natural gas is controlled. Prices have gone up some. There is no question about that. They have gone up 10 percent annually under NGPA. That was passed by the previous watch, but nothing we have done has caused the prices to go up. But the price has caused conservation, and we have conserved, Senator. Because of the drive of the price mechanism, we have conserved almost as much oil as we have found in new proven reserves in the past 3 years. Conservation is important to us.

Senator **Murkowski**. Senator Melcher.

Senator **Melcher**. Mr. Secretary, the amount of coal R. & D. money compared to nuclear seems to be rather out of proportion. There is a little over 100 million for coal as compared to a little over 1 billion for nuclear. Is that about right?

Secretary **Edwards**. That's about right, yes.

Senator **Melcher**. Now the R. & D. money you have got in this proposed budget that is to generate electricity would be what, all tied up in nuclear?

Secretary **Edwards**. To generate electricity?

Senator **Melcher**. Yes.

Secretary **Edwards**. A great portion is dedicated to nuclear. However, about 70 percent of the nuclear budget, as I said, is dictated by Congress as to what should be done with it.

Senator **Melcher**. I don't understand your answer. About 70 percent of the nuclear?

Secretary **Edwards**. Seventy percent of the nuclear budget is dictated by the Congress as to where it should be going—waste management and that type of thing.

Senator **Melcher**. How much of this $1 billion cost for nuclear R. & D. is designed to resolve problems dealing with generating electricity?

Secretary **Edwards**. Senator, I have a hard time breaking that out specifically.

Senator **Melcher**. The Clinch River money is about $250 million?

Secretary **Edwards**. That's about right.

Senator **Melcher**. For R. & D.?

Secretary **Edwards**. The nuclear budget is a billion, 16 million total.

Senator **Melcher**. Is that to generate electricity or what is it for?

Secretary **Edwards**. Some of it is to generate electricity; about $265 million of that is for waste management of advanced nuclear systems, and $31 million has to do with the space program and that type of thing, that is dictated by the Congress. Converter reactor systems is about $32 million; nuclear fuel cycle is about $59 million; and breeder reactor systems is about $577 million. About half of that goes to Clinch River. Remedial actions, that is, actions to clean up the mill tailings and that type of thing out in your State and other States, is about $50 million. So that is why I say it is hard to say how much of that is dedicated to generating electricity. Some of it has to do with future research and development that I hope will lead us to electrical generating capacity in the future.

If we can get the breeder reactor commercialized and working, we can use plutonium, and we can generate enough electricity to serve the free world for the next 3,000 years.

Senator **Melcher**. So most of the nuclear R. & D. is earmarked for purposes of generating electricity?

Secretary **Edwards**. I cannot say that. I would say that $577 million goes to basic breeder technology advancement, yes.

Senator **Melcher**. Most of the billion dollars is for generating electricity, and how much of the R. & D. money for fossil research is, which hopefully will lead to more efficient use of generating electricity?

Secretary **Edwards**. The total is $107 million. It is just hard to say, Senator, exactly how much of that would be used in the generation of electricity.

Senator **Melcher**. Probably none?

Secretary **Edwards**. No; probably a good portion of it.

Senator **Melcher**. Which portion? Will you liquefy coal to generate electricity?

Secretary **Edwards**. No. The coal liquefaction is only about $26 million. When you liquefy coal, you have to take it through the gaseous process and you could use some of the gas to generate electricity, so it is hard to say exactly how much of it.

Senator **Melcher**. You are not recommending that somehow we take coal and make gas out of it to get better high-priced synthetic natural gas and then generate electricity from it, are you?

Secretary **Edwards**. I would hope not.

Senator **Melcher**. I would hope not, too, so probably——

Secretary **Edwards**. A lot of gas is being used to generate electricity today.

Senator **Melcher**. Not expensive synthetic natural gas, though, is it?

Secretary **Edwards**. We do not have that much synthetic natural gas.

Senator **Melcher**. If all the 100 million, a little over 100 million, were devoted to R. & D. to generate electricity, that would be about 19 or 18 percent of the R. & D. devoted for nuclear, or maybe even 12 percent of what is devoted to nuclear, which is R. & D. for generating electricity.

Now in light of the significant failures of continuation of construction of light water breeder reactors to generate electricity, how can you possibly justify just dropping R. & D. in coal for more efficient use of generating electricity?

Secretary **Edwards**. Senator, it has to do with setting priorities. This administration believes that there is a future for nuclear and for the breeder reactor. We would like to recapture the leadership there. We feel that the private sector has done a good job in the fossil fuel area. They have moved ahead with research and development in those areas of endeavor and, certainly, we hope they will pick it up.

Senator **Melcher**. The only ongoing R. & D. that is being sponsored by the Department of Energy for central base power generation of electricity, using the fossil fuel, is MHD. Now I am quoting from your document, fiscal year budget, fiscal year 1983 budget:

> MHD is a long-term technology which relative to other agency funded advanced electricity generating technologies under development, has much higher risks and costs.

Now the only other thing I have been able to elicit from you this morning, or that I can find in your statement or in your budget proposal, is the breeder reactor for generating electricity. Isn't that high risk? Isn't that long term?

Secretary **Edwards**. Yes, it is.

Senator **Melcher**. Well then, getting down to the fossil energy and the statement today, I will quote again:

The process began last year when the fossil energy budget was realized to concentrate on long-term, high-risk research and development while relying on the private sector to demonstrate the commercialized promising individual technologies and processes.

There is repetition in the budget statement. MHD is a long-term technology, much higher development risks and costs. Which way are you going to handle it? If it is a high-risk technology with higher development risks and costs, you say that is what you are going to put the money in, yet the MHD if you had your way would be dropped.

Secretary **Edwards**. Senator, I think there is some value in MHD, but I think that technology doesn't have a high potential when you compare MHD to, say, a breeder reactor. High payoff is also part of this, and I do not think MHD, in our opinion, has the high payoff potential that a breeder reactor does.

Senator **Melcher**. You are going to put all your eggs in the nuclear basket?

Secretary **Edwards**. No, we are not going to put all our eggs in the nuclear basket.

Senator **Melcher**. Where are you going to have some other eggs in another basket then to get to a better technology to generate electricity other than the breeder reactor?

Secretary **Edwards**. We hope the private sector will move ahead with the continuation of light water reactors.

Senator **Melcher**. How are they going to move ahead when they are mothballing them? Just to name one area, the Northwest, I think we have got four electric co-ops there who for the first time in history may go broke after they have doubled their rates just to pay the interest, their share of the interest on the mothballed groups, light water nuclear reactors.

Secretary **Edwards**. Senator, I think that is not a nuclear reactor problem. They have some management problems. I think most people would conclude it is a management problem there.

Senator **Melcher**. A management problem?

Secretary **Edwards**. Regarding those five reactors, I think they would have had problems if they had been building five coal generating plants.

Senator **Melcher**. TVA has got a similar management problem?

Secretary **Edwards**. I am not sure that is the same problem as the west coast, but it is a combination of things. It is an economic situation where interest rates are extremely high and where the regulatory aspects have postponed some action. We also have utility companies that are well managed, that have aggressive management, and that have been successful in building light water reactors in the past and have them generating electricity for the American people today.

Senator **Melcher**. TVA then and Bonneville are just poorly managed?

Secretary **Edwards**. Are you talking about the whoops?

Senator **Melcher**. Yes.

Secretary **Edwards**. I would say that most people I have talked to have told me it is a management situation more than anything else. They have some new management now, and they are turning it around, I think. They have mothballed two of those projects.

They plan to continue construction on three of them, and I hope that they will be successful in getting those plants on line and generating electricity for that area of the country.

Senator MELCHER. Well, Mr. Secretary, my time is up now, but I will wait around here to get another crack at you because we are not near finished.

Secretary EDWARDS. That's what I'm here for.

Senator MURKOWSKI. Thank you, Senator.

Senator East.

Senator EAST. Thank you, Mr. Chairman. I will be brief. I would like to take a little different tact, Mr. Secretary. I would like to commend you for the leadership that you have given in the Department of Energy. We have been dealing here, and understandably so, with a lot of very important specifics that individual Senators are interested in, and obviously there are a lot of matters in the energy field, as in any field, that reasoned minds can differ over, but I would like to let the record show that I think your leadership there has been outstanding, and I as one member of this committee do wish to support you and the administration in their desire to try to create a climate of an opinion in this country—an attitude from the administration and from Government toward energy that encourages and rewards production of energy of all kinds.

If we do what I think we are trying to do, and the administration is trying to do, we are going to help the American economy. We are going to help the American people. We are going to have more energy at a lower cost. Not only is that the key to revitalization of our economy, as I think it is, and you have well stated on many occasions, but it is a vital component of a strong defense and foreign policy.

I think you are in a very vital position. I think you have given excellent leadership, and I like the general philosophy of this administration. I think there are a lot of people in this country that also agree in this energy field, and I think the election in November 1980 reflects that kind of philosophical commitment.

I have been interested to note in recent weeks that we know now that oil decontrol didn't hurt. We have now more oil than we had before. The price of gasoline is coming down. You can be assured that if it had been going up in price, you would be hearing that from pillar to post all over the country from many and various and sundry people.

I think you have made some progress in this area. I simply wanted to let the record show that, and lest we get too bogged down in specifics and maybe nibbling over this point or that. We must not lose sight of where you are trying to go and the quality of leadership that you have given, and I commend you and the administration. I hope you stay steady on course, and appreciate that you have got a lot of friends and supporters in the Senate.

That's all I have to say, Mr. Chairman.

Secretary EDWARDS. Senator, I didn't come mentally prepared for that kind of praise at this session. I appreciate it.

Senator MURKOWSKI. There is no guarantee that this vein will continue.

Senator Ford.

Senator **Ford**. Thank you, Mr. Chairman. Now that he's through with you, Jim——

Secretary **Edwards**. I'm prepared for Kentucky.

Senator **East**. Back to the real world.

Senator **Ford**. Now back where the rubber meets the concrete—prices of gasoline and home heating oil may be going down, but let me give you the first year of this administration. Oil of all types when you came in was $1.269. By the way, I am reading from "Weekly Petroleum Status," Department of Energy. That was January 1981, and December of 1981, it was $1.348. Senator East can understand that, and residential heating oil went from $1.144 to $1.22, you know, so it didn't go down last year. It went up.

I am interested in your statement, Jim—by the way, are you still looking forward to going back to put your fingers in saliva?

Secretary **Edwards**. Sometimes that's a lot more fun. I look forward to that with growing interest.

Senator **Ford**. You said that last year and I wondered if your attitude has changed any.

Secretary **Edwards**. That is when I left the Governor's office in South Carolina. My banker was a little happier about it, too.

Senator **Ford**. On page 6 of your statement it appears that you are going against the poor people and the kids, and it says:

> The State and local assistance programs, which include grants for Weatherization and Schools and Hospitals, are proposed to be terminated.

And I look at the bottom of that page and I look at the last sentence, and it says:

> And the request of $9.5 million for Solar International activities will complete our Government's commitment to the Saudi Arabian Government under the Cooperative Project Agreement for jointly funded solar energy research and development.

Yet you are cutting out all the solar energy, apparently trying to zero out over here. You mentioned solar a while ago. Tell me about that.

Secretary **Edwards**. You mean the Saudi Arabian project?

Senator **Ford**. I am talking about the zeroing out of the weatherization for schools and hospitals and so forth, and then giving $9½ million to the Saudis.

Secretary **Edwards**. Senator, that project was not one that we created. That was an onboard commitment made by the previous administration, and we try to deliver the Nation's commitments made by previous administrations, although we may not always agree with them. If America is going to be a dependable nation, we think we have to do that.

Getting back to the grants——

Senator **Ford**. Before you get back to that, tell me about the international commitment to Japan. Tell me about the commitment to Germany. That's gone. That was apparently in the previous administration, but to the Saudis you go ahead and keep that commitment, but you had to send one of your people over there to give the others a document on the plants that have gone down the drain, that you have closed down.

Now what is the difference in the commitment to the Saudis and to the Japanese and the Germans? Tell me the difference in the commitment of previous administrations and the attitude of this one.

Secretary **Edwards**. One of them has to do with long-term, high-risk research in solar energy with the Saudis, and the other had to do with a commercialization project. As you know, you and I have some rather extensive discussions last year about these projects. We feel commercialization should be left to the private sector, so that is basically one of the differences there.

Senator **Ford**. When you leave it to the private sector, they close it down, except Clinch River. That stays afloat. You ought to change the Department of Energy to the Department of Nuclear Energy.

Secretary **Edwards**. Getting back to your Health and Human Services situation, the weatherization program, we said on several occasions earlier this morning before you came in that the Health and Human Services Department has about $1.3 billion for low-income home energy assistance; 15 percent of that can be used for weatherization. Of course, you have the HUD program of $3.5 billion in 1982, and again in 1983.

Senator **Ford**. That is included in 1983?

Secretary **Edwards**. Yes, $3.5 billion, also for HUD, and they can use those moneys for the community development block grant program.

Senator **Ford**. Will they?

Secretary **Edwards**. If it is left up to the State to decide, I think that they will have set priorities and decide where they want to use the money. As Governor, we all cried for block grants rather than categorical grants because we felt that we knew what each of our respective States needed better than Washington did. I don't know whether that is true or not, but that was our attitude. So we hope that we can give that in the form of block grants, and it will save us a lot of administrative cost, too.

I understand you can save about 25 percent administrative costs by giving block grants over categorical grants.

Senator **Ford**. Who saves 25 percent, the Federal Government?

Secretary **Edwards**. The Federal Government.

Senator **Ford**. It will be imposed on the States.

Secretary **Edwards**. To some extent, yes.

Senator **Ford**. So you are shifting the deficit from the Federal Government to the States and they will have to raise their taxes if they meet the same criteria they are now operating under.

Secretary **Edwards**. I never have understood why the Federal Government owes the trillion dollars and should be sharing their resources with States.

Senator **Ford**. I didn't vote for it.

Secretary **Edwards**. All right. We don't need to continue that discussion then. We are in agreement.

Senator **Ford**. I wouldn't want to discuss a trillion dollar debt ceiling either.

Secretary **Edwards**. What was the question?

Senator **Ford**. I don't know. Let me just say this. Your nuclear plants may well die if fossil programs die also. Let me put that out kind of flat to you, and I might say to you that the Clinch River lived last year because the fossil programs lived, and they may not live this year, and I think that the people on this committee understand what I am saying. I hope you do also.

Last year, Congress doubled the administration's funding for fossil. Now if that happens this year, what staff contingency plan do you have to carry out the fossil programs if we increase the funding?

Secretary **Edwards**. Any time you have programs, you need staff to follow the program, and we will have to come back and ask for some additional staff. Right now we have a staff on board. If they can't handle it, we would change our plans. We have plans to reduce some staff, but if it came back, and certainly that is a prerogative of Congress——

Senator **Ford**. What if we reduced it a smidgeon in some other area and gave a smidgeon to fossil? You would come out even, wouldn't you?

Secretary **Edwards**. If you take a little bit here and take a little bit there, you come out even.

Senator **Ford**. You won't ask for any more. Do you have a contingency plan in case Congress does that?

Secretary **Edwards**. I have found out we have contingency plans for almost anything that may happen, and we will adapt to whatever Congress dictates.

Senator **Ford**. Do you have a contingency plan on 1503, Senate bill 1503? That is the Standby Petroleum Allocation Act of 1982.

Secretary **Edwards**. We will. That has not been signed into law, I understand. There is always a possibility of a veto of that bill. I feel, and so does the administration, that the marketplace is a lot more efficient and effective than the Government trying to allocate product. I think most people will agree that the Government's inability to allocate product was the thing that created the long gas lines with the minimum amount of cutoff we had in the previous two disruptions. If we let the market work, I think it will work better and allocate the product. The price may go up sometimes in times of shortages; but I might remind you that, under the 7 years of price and allocation mechanisms, in place, the price went up higher than at any other time in America's history. One year it went up 130 percent, so the fact that you have price and allocation mechanisms in place does not necessarily mean that you are going to be able to control prices and keep them low.

Senator **Ford**. Well, if 1503 is not enacted, there will be no Federal preemption of State price or allocation laws in the event of a crisis. What will prevent the States from creating a massive conflicting State energy regulation pattern if this legislation is not enacted? There are over 30 laws as I understand it right now on the books in various States. In case we do have a crisis, they would not be preempted by some national direction.

Secretary **Edwards**. That issue is one that we have to address. There is no question about it, and it presents a problem. This administration feels that States should have the right to rule themselves; but in this instance, I would hope we would look at some mechanism to help with that problem. It would be a problem having that many different State plans.

Senator **East** [presiding]. Senator Ford, I would like to advise you that your time has elapsed, if we could come back to you.

Senator Bumpers.

Senator FORD. Some people give notes and others say it out loud.

Senator EAST. Sorry. We'll give you a note next time.

Senator BUMPERS. Mr. Secretary, the Joint Tax Committee estimates that in 1983 the oil industry, from expensing of intangible drilling costs, and from the depletion allowance, this says nothing about tax credits from royalties, but just the depletion allowance and the intangible drilling costs, would cost the U.S. Treasury $5.7 billion. That translates into $1.85 a barrel for all the oil we produce. By contrast, the Treasury will lose $1.66 billion for conservation and alternative energy development through tax credits. That is about 3½ times as much to the oil industry as a subsidy as we put to alternative energy tax credits and conservation tax credits. That has been sitting around here ever since I have been here, and I think this is irreputable. The cheapest oil is the oil we don't burn.

Do you agree with that?

Secretary EDWARDS. I agree with that.

Senator BUMPERS. Do you have any figures to show how much oil we might not burn if we gave as many tax credits for conservation and research as we do to the oil industry?

Secretary EDWARDS. Senator, I don't have any specific figure. We could try to work you some up for the record along that line.

Senator BUMPERS. I wish you would. I would like to see some comparable statistics on that.

Secretary EDWARDS. Say that again so we can record exactly what you want.

Senator BUMPERS. If you will let me, I will just have one of my staff members get with you after this is over and we will give you a fairly definitive question on that. I have seen statistics on it, but I don't know that they are accurate, and I would like to see DOE's.

Secretary EDWARDS. We have conserved almost as much oil as found in new proven reserves in the past 3 years.

[Subsequent to the hearing the Department of Energy supplied the following:]

Based on a follow-up discussion DOE staff had with Senator Bumpers' staff, the Senator want to know how much conservation could be "bought" if some fraction of the approximately $5 billion subsidy to oil production (through depletion allowance and expensing of exploratopm and development costs) were used to fund conservation programs. These programs include the Schools and Hospitals Grant Program, the Solar and Conservation Bank and the Weatherization Assistance Program.

Because of the differneces in the structures and goals of the three programs mentioned, the cost to the Federal government of a barrel of oil equivalent (BOE) of energy saved varies over a wide range—from less than $3 to $25. The range for even a single program such as the Solar and Conservation Bank varies from $3 to $15 Federal cost per BOE depending on the nature of the participant and the analysis assumptions regarding disoucnt rates and the effective life of the conservation action undertaken. For an example expenditure of $500 million, the total annual energy saving would be in the range of 20 million to 150 million BOE. Only some fraction of this would actually be oil since the homes and buildings eligible for the three programs are served by oil, natural gas and electricity.

Secretary EDWARDS. One of the reasons the OPEC nations are having troubles today is because we are conserving so much. At one time, they had a market of about 30 million barrels a day; and today they have a market of about 20 million barrels a day. So they have lost a third of the market, and most of it is because we are, in fact, conserving in this country.

Senator **Bumpers**. I think they have cut about 10 million barrels a day from their production. That is what the world is using less from the OPEC cartel itself.

Secretary **Edwards**. That's correct, but we have only cut consumption by about 2 million barrels a day. The rest of the world cannot afford it, or they are also conserving and switching to alternate sources of energy—coal, nuclear, things like that.

Senator **Bumpers**. Now to the immediate matter at hand, that is, the dismantling of the Energy Department. The Congressional Budget Office prepared an analysis of this, and they said reorganization of DOE would save approximately $3 million, but they say the cost of reorganization would cost approximately $3 million, and that, "Reorganization by itself is unlikely to result in significant budget savings."

What would you estimate this dismantling of DOE to cost?

Secretary **Edwards**. Senator, when you talk about the savings, that is what we are talking about. Is there any advantage in savings? We have streamlined and cut down the expenditures of the Department of Energy since we have been here. In recent years, and if you take the 1981, 1982, and proposed 1983 budget, we will have reduced the previous administration's budget by about $10.4 billion, but that has already been accomplished.

Now when you talk about what we could do from here on, I think that before we could give you a specific answer, we would have to see what the architecture of the new Department of Energy will be after the Congress finishes with it and after we in fact decide all the fine details. But there is a certain amount, a couple of hundred million dollars in administrative costs, from which any additional savings will have to be gotten.

Senator **Bumpers**. A lot of those administrative costs are going to have to be picked up by whichever agency takes that particular function.

Secretary **Edwards**. There is no question about that. I do not think we can focus on the savings from this point on. We can talk about the savings up to this point; but I think there is a tendency, as you know, for a bureaucracy to grow, particularly at the Federal level and the State level. If we can merge this with another department, I think it will keep down the regrowth of this proliferation that took place. I think that when Carter created the Department of Energy, he had a budget of about $10 billion; and then in 1982 he had a proposed budget of $16.7 or $16.8 billion, so you see how it just grew by leaps and bounds. I think the proposed reorganization will help cut down the cost in the outyears by keeping down the growth.

Senator **Bumpers**. Could you tell this committee just in two or three sentences what is the energy policy of this administration?

Secretary **Edwards**. I can tell it to you in just a very few sentences, and it is so simple that people don't feel like we have an energy policy.

Senator **Bumpers**. I have to admit I am among those.

Secretary **Edwards**. I am glad you asked the question. Conserve all we can; produce all we can. That's all.

Senator **Bumpers**. Why are you taking away all the money that would foster conservation with the exception of tax credits?

Secretary **Edwards**. We have tried our best to trace how much of the conservation we can attribute to all that money that we are pouring in, and direct funding. Less than 5 percent can be attributed to that, so we feel that the price of energy has driven people to conserve.

Senator **Bumpers**. There isn't any question about that. Let me ask you one question. Can you give this committee some idea of how much of our conservation efforts are not really conservation but simply low economic performance? Plants last month operated at 70 percent capacity.

Secretary **Edwards**. There is some of that. There is no question about that, and we can get you a figure on that.

[Subsequent to the hearing the Department of Energy supplied the following:]

In our estimates of conservation, we try to take into account variations in economic activity. For example, a recent study by Oak Ridge National Laboratory estimates that energy consumption in 1980 was about 20 Quads less than what pre-embargo trends (1954-1973) would suggest. Approximately half of this was due to the slow down in GNP growth since 1973, the other half is due to improved energy efficiency.

In the current recession, we know that there is some extra conservation due to the slowdown. Our best estimate, and it is a rough one, is that our overall energy consumption has been reduced by about 5 percent, due to the worsened economic conditions.

Senator **Bumpers**. I would like to see that if you have anything.

Secretary **Edwards**. The economic situation?

Senator **Bumpers**. Yes. That is what I want to know. I might say in that connection, and this goes back sort of to the line of questioning—we will come back to your energy policy, but in 1980, this goes back to what Senator Heinz was talking about, in 1980 which was the worst drought, the worst heat we have ever had in my home State, and in much of the rest of the country. We had 10 people die in Arkansas from heat prostration. Almost all of them were elderly people who were found in attic apartments and a lot of them almost without exception either had air conditioners, ceiling fans, or something else that had they been willing to turn them on, they would not have died, and almost without exception every one of them who died, they were shut off because they were afraid they wouldn't be able to pay their cooling bill.

Now that is the reason I know that low income energy assistance, maybe that is considered a liberal vote around here, but it is also a very humane vote. That is the reason I feel very strongly about pricing policy and conservation, and low income energy assistance.

Now back to the point—you said this administration's energy policy is to produce all you can on the one hand, and conserve all you can on the other hand, and that is perfectly laudable and legitimate, but on the production side, I really think that this administration has myopia because they are talking really about producing oil and natural gas, and to a lesser extent, nuclear power, but there are a whole host of other things that you know we are going to have to start relying on heavily before the turn of the century.

Secretary **Edwards**. And coal.

Senator **Bumpers**. My question is, what are we going to do when these finite resources begin to drain? You can't produce more. You can give all the tax incentives you want. You can raise the prices as high as you want, and oil production is going to decline and natural gas production is going to decline. Are we going to wait as Congress is so wont to do, wait until the crisis and then react? Is that what we are going to do on the production side of this policy?

Secretary **Edwards**. I don't think so. I think that if we can move into the research and development of nuclear—the breeder reactor, fission, fusion—we can move ahead in that area, and certainly continue some basic, long-term research in high energy physics. We do plan to strengthen the budget. We are putting more money into fundamental basic research. If you can find other ways to use our natural resources, our oil shale, for example, coal conversion—that is one reason I pushed so hard and fought so hard to get the three synthetic fuels projects going—two oil shale projects, and one coal conversion project. If we can get those two projects and prove that they can be commercialized—we did that with guarantees, price supports and price purchase agreements on one, and loan guarantees on the other—if we can just find ways to use our oil shale, for example, we have——

Senator **Bumpers**. You are still talking about finite resources—oil shale, coal. You are still talking about finite resources.

Secretary **Edwards**. What other resources do we have other than conservation and finite resources?

Senator **Bumpers**. You have got solar, wind. You have got water, a whole host of things. You are talking about losing our lead. You are lamenting that we had lost our lead in nuclear and in breeder reactors to two other countries, and yet that is the same road you are going to take us down on photovoltaics, for example. We lead the world right now in technology on photovoltaics, and this administration is only choosing to cut research in that area by 93 percent.

What are we going to do when the Japanese start taking over the world's solar markets? Sit here and talk about how foolish we were on this 23d day of February?

Secretary **Edwards**. Senator, I think our long-term basic research will keep us in the lead technologically. I don't know. Most of the Japanese technology is American technology that they have moved to their country, developed it, and concentrated on one little small part of it.

Senator **Bumpers**. We got fat and happy that we were able to do that.

Mr. Secretary, I will just ask you one question. On the conservation side of your energy policy, you said in your confirmation hearings in response to a question by Senator Jackson on the appliance efficiency standards that, "I fully intend to comply with the requirements of the law pertaining to the appliance efficiency standards."

Have you issued those standards as the law requires?

Secretary **Edwards**. No, we have not, and we do not have any money in this budget for that program.

Senator **Bumpers**. You had a year, though, to implement those standards or to issue those standards, and you promised Senator Jackson over 1 year ago that you would do it. I know there is no money in the budget now for it.

Secretary **Edwards**. There has been a change in philosophy on those appliance efficiency standards, and we are complying with the law.

Senator **Bumpers**. Who had the change? Congress has not repealed the law.

Secretary **Edwards**. There is an area of law that permits us not to issue those standards unless the standards prove that it will improve our energy conservation.

Senator **Bumpers**. So you all conclude those standards wouldn't improve conservation?

Secretary **Edwards**. We felt that to issue those standards certainly would not improve it that much. I will give you a special report for the record on our position on that.

Senator **Bumpers**. I wish you would.

Secretary **Edwards**. That is a highly technical area in the law.

Senator **Bumpers**. I am not all that hot about appliance efficiency standards, but I did want to point out that the law ought to be complied with.

Secretary **Edwards**. My General Counsel says we are complying with the law.

[Subsequent to the hearing the Department of Energy supplied the following:]

The Energy Policy and Conservation Act (EPCA), as amended by the National Energy Conservation Policy Act (NECPA), requires the Secretary of Energy to prescribe energy efficiency standards for thirteen consumer products, unless by rule the Secretary determines that a standard for a product is not technologically feasible or economically justified or would not result in a significant conservation of energy.

EPCA required a final rule to be adopted for nine products that were given priority under the Act by January 2, 1981. A proposed rule to establish standards for these products was published in mid-1980, but the public comment on the proposal was strongly negative. Moreover, substantial criticisms were made of the fundamental economic methodology that had been employed. These criticisms were received not only from industry but also from the Carter Administration's Justice Department, Commerce Department, and Regulatory Analysis Review Group. As a result, DOE published in February 1981 a notice that it would not be able to meet the statutory deadline and that DOE would conduct a full reevaluation of the 1980 proposed rule and its economic and engineering bases.

This reevaluation, which was completed in the late fall of 1981, indicated that for eight of the nine products a standard would not be economically justified within the meaning of EPCA and that there would be minimal energy savings attributable to a standard. The ninth product—home heating equipment, other than furnaces—has not been addressed at this time because of the absence of appropriate test procedures upon which to measure energy use.

DOE is currently drafting a notice of proposed rulemaking under the guidance of the General Counsel to reflect the above determinations. This effort has been delayed due to a number of problems, but DOE hopes to issue the proposed rule before the end of March.

Senator **Bumpers**. Thank you, Mr. Chairman.

Senator **East**. Senator Melcher.

Senator **Melcher**. Thank you, Mr. Chairman. Just to recap, Mr. Secretary, where we were at before, there is in the proposed budget over a billion dollars for nuclear research and development, and then in the same budget there is $90 million, or $91 million for coal research and develoopment.

Now the nuclear, $1 billion-plus, most of it, more than half by some margin, is for research and development to generate electricity, and then the coal side of it, very little of the $90 million is for research and development and generating electricity. We went over the nuclear plant shutdowns for Bonneville and TVA, and you suggested poor management was the reason and the high interest rate and so forth, and I think that gets to the point that the projected cost per kilowatt hour of electricity generated from those plants is more than 70 mils if they could have been completed. I don't wonder there is nobody willing to put up risk money for that purpose, compared to coal strip 3 and 4 nearing completion, just using the conventional means of steam generation, electricity using coal is projected at 43 to 44 mils per kilowatt-hour.

Now the Clinch River breeder reactor, which gets approval of this budget for over a quarter of a billion dollars to continue that line of endeavor, has yet to generate 1 kilowatt of electricity. The MHD technology which was zeroed out in this budget, was the only ongoing research and development program utilizing coal to develop a better technology for central base station generation of electricity, and would be zeroed out.

However, the MHD program has generated electricity, and is nearing a point of reaching the goals which you list on page 65 of this document, the budget document. The goals are, to achieve overall coal to busbar energy conversion efficiencies in the 50-percent range. That is generally thought to be somewhere above 50 percent, to compare with the conventional means of generating electricity using oil which is about 36 percent, perhaps 35 percent in coal strips 1, 2, 3, and 4, so that is a very worthwhile goal to me.

Two, the goal listed here on page 65 of the budget document is to meet or better all existing Federal or proposed Federal standards for dioxide and nitrogen dioxide, and particularly emissions with reduced thermal pollution.

Three, to achieve a low cost of electricity, and four, attain high plant availability and reliability. With those goals in mind, and with the fact that the technology has generated electricity, although in a very small scale, the budget is not only warped toward nuclear, it defies all commonsense to knock out and to zero budget the only ongoing R. & D. for central-based generation of electricity using coal.

Can you respond to that, or is this just——

Secretary Edwards. I will try to respond. I do not know whether it will be satisfactory or not.

Senator Melcher. That isn't the point. I would just like your response on the record.

Secretary Edwards. Yes. The MHD does not show that much improvement in the estimated cost of electricity. I commend you for sticking by that product, and I was delighted to hear they finally were generating electricity with it.

I might remind you that the breeder reactor is generating electricity all over the world—much more advanced proven technology.

Senator Melcher. Why don't we just use their technology then?

Secretary Edwards. Basically, that is probably what we will be doing. We hope we can improve on it because they got the technology from us originally.

Senator Melcher. You are saying that the private sector is out to pick it up. Now the private sector, why not let them pick up the breeder reactor technology?

Secretary **Edwards**. Senator, we have an agreement that is ongoing in the breeder reactor. If we can get the component development and the planning taken care of beyond the licensing stage, from that point out, the private sector has, in fact, agreed to pick up the cost of construction of the large followon breeder.

Senator **Melcher**. It is generating electricity all over the world. Why not pick up that technology? Is it not cost effective?

Secretary **Edwards**. Well, I think it is cost effective. I think it will be.

Secretary **Edwards**. Senator, you mentioned that magnetohydrodynamics has finally generated electricity. The implover a half a billion dollars into further research and development which you say is already proven all over the world? It is available and it is cost effective.

Secretary **Edwards**. Senator, you mentioned that magnetohydrodynamics has finally generated electricity. The implication I gather from your remarks was that MHD was ahead of the breeder technology, that MHD was already generating electricity, and I am just trying to put that in proper perspective.

The first electricity ever generated by nuclear power was generated by the breeder reactor. Most people do not realize that. We have breeder reactors in this country that are working. In fact, I was in Idaho with the chairman of this committee visiting the research area out there; and we stood on top of a breeder reactor while it was generating electricity. These are all proof-of-principle type reactors and research reactors. We certainly have to develop our own reactors. We need to move into the development of commercial breeder reactors; and in order to do that, you have to go through all the Nuclear Regulatory Commission licensing process.

I feel it is essential that we do move into breeder reactor development. I think the potential is there for high production. If we can move into this area and use the plutonium—the resources that we have available—we can generate electricity for practically all of mankind for a thousand years. The high payoff of the breeder is the thing that drives me to say we should aggressively produce and build the breeder.

Senator **Melcher**. Just to make sure you understood my point, I was referring to the Clinch River breeder reactor, and it is quite clear. Now still I think you are not getting to the point of why mothball the only ongoing coal use R. & D. for central base station generation of electricity.

Secretary **Edwards**. Senator, it is just purely a setting of priorities. When we set the priorities, we did not feel that this was a high enough payoff technology to continue the funding.

Senator **Melcher**. Well, in my part of the country which has a lot of coal, it is felt to be the best payoff and the most dynamic of all the R. & D. programs that are going on, but returning to MHD, where does the Department of Energy derive the authority to use the appropriated funds to terminate a program mandated by Congress?

Secretary **Edwards**. Senator, I think we can request rescissions or deferrals on any of these. Not being an attorney, I would like to refer that to my general counsel for a more indepth answer.

[Subsequent to the hearing the Department of Energy supplied the following:]

The Department's Magnetohydrodynamics (MHD) program is authorized, but not mandated, by law. The applicable statute provides that this demonstration program can be undertaken if such action is judged to be "practicable." 42 U.S.C. 5905(b)(3)(C).

The Department's fiscal year 1983 budget request reflects the judgment that continuation of this program, when weighed against competing Fossil R. & D. priorities, is impracticable. The Department will begin to undertake orderly closedown activities of the MHD program on April 15, 1982, pursuant to a deferral of fiscal year 1982 appropriations that was transmitted to Congress on March 18, 1982.

Senator **Melcher**. We haven't seen either the rescission or the deferral, but I hardly think a deferral would be the proper way of using appropriated funds to mothball a mandated program.

Now does this budget proposal that you have before us for fiscal year 1982, this year, contain $7.6 million of appropriated funds to terminate the MHD program?

Secretary **Edwards**. This is the 1983 budget, and let me check on that and see.

Senator, I am informed that we plan to use in the 1982 money, $21.8 million there, we plan to ask for $7.6 million to terminate the project and ask for deferral of the remaining moneys in the next couple of weeks.

Senator **Melcher**. Well, Mr. Secretary, you have been around here a long time.

Secretary **Edwards**. That's a deferral of $1.9 million.

Senator **Melcher**. Well, I am going to the point here, you are going to ask for a deferral of 7.6. You are not? What are you going to use the 7.6 for?

Secretary **Edwards**. The closedown costs.

Senator **Melcher**. You are going to use appropriated funds for R. & D. to close down a proposal by law of Congress?

Secretary **Edwards**. With your permission.

Senator **Melcher**. Now the permission is going to be under what means?

Secretary **Edwards**. Senator, I am told that the closedown will not start until April 15, and that will give Congress the time to act on this and clarify it and give us their ideas.

Senator **Melcher**. How are you going to approach Congress? By a rescission proposal?

Secretary **Edwards**. We are going to request a deferral of the money.

Senator **Melcher**. We will face that when it gets to the Appropriations Committee.

Secretary **Edwards**. Along with the $1.9 million.

Senator **Melcher**. Let me just conclude, Mr. Secretary, as I am sure you are aware, a balanced approach is not met in this budget proposal of yours, and that between coal and nuclear, it not only falls short. It is dismal. To get an appropriation bill or even a continuing resolution through this Senate would be extremely difficult, if not impossible, on the basis that you have proposed, and I suggest that not only to the Department of Energy, but to all of the people that are interested in any portion of your budget, to take note that I do not have any intention of allowing a continuing resolution or an appropriation to go forward with this disparity between nuclear research and development and coal research and development.

Thank you, Mr. Secretary.

Senator **East**. Senator Warner.

Senator **Warner**. Mr. Secretary, during the recess I allocated quite a bit of time to study two segments of your Department, one not relevant to this hearing, and that was the atomic weapons research facility at Los Alamos in Sandia, and then following that, lengthy inspection of the Savannah project.

Now as you know, here in the Senate a number of us are quite interested in becoming more interested in this nuclear waste situation. At the present time we are looking at the concept of separating the civilian and military nuclear waste programs.

Would you care to comment on the advisability of that separability?

Secretary **Edwards**. Senator, traditionally this has always been separate. I think that from a psychological standpoint as well as from any other standpoint, personally it is going to be a necessity to keep them apart.

Senator **Warner**. Well, I share that view, and I also think that there are some very substantial international implications to that issue.

That brings me then to the progress being made. I am sure you are conversant, and I won't bring it up here, with the progress being made on the military side. I saw the pilot plant in Savannah. Now let's also discuss the other plant. That is Barnwell, and there is the effort to get the private sector to address that situation.

What do you perceive is the projection for that facility?

Secretary **Edwards**. Senator, first, I have always felt that that is a tremendous national resource. I think the original cost of that plant was about $385 million. They had planned to reprocess the spent fuel rods and you understand the reprocessing consequences. I think we have to decide, No. 1, are we going to bury the spent fuel rods or the energy left in it; or are we going to recycle that spent fuel rod and take the gut out and reduce the radioactive part to 10 percent of its original volume where it can be much easier to take care of, fold it into a log and bury the logs. I think that is the first question we have to answer.

Senator **Warner**. Where are we on that? That is precisely what I am addressing.

Secretary **Edwards**. Senator, we are sort of on dead center. We can't seem to make that decision for some reason. That is the first decision we have to make.

Senator **Warner**. That concerns me because as I talk to utility executives, the private sector, the backlog of material——

Secretary **Edwards**. There are about 4,000 of these spent fuel elements lying around the country in 50 some different locations. The antinuclear group feels that we shouldn't find answers to the waste problem because if we don't, it is going to kill the nuclear option, and that is one of their approaches. Even if we don't generate another kilowatt of electricity with nuclear energy, we still have this problem. What are we going to do with them?

We have the technology in place, as you know, Senator, to go ahead and start burying waste. Why we are postponing it is beyond me. We have to move ahead. We have the technology in place. We ought to process and glassify the radioactive waste and deposit energy in an appropriate geological formation. Any one of four would do. I don't think we have to keep studying this issue. I think this is the most studied issue in the history of the world, and I think we have studied it enough. It is time we started burying some of it, and that is what we are looking for, and I would appreciate any help that you and the committee could give us to do that.

Senator **Warner**. I want to take an increasing role in this. When you say decisions beyond them, where is this decision?

Secretary **Edwards**. It is sort of divided between us and the Nuclear Regulatory Commission, the Congress, and White House.

Senator **Warner**. Recommend a course of action, and I will consider it to get this decision made.

Secretary **Edwards**. Senator, the administration feels that the private sector should be doing the reprocessing, and my philosophy is such that I would certainly agree with that. However the private sector had its hands burned badly when it put $375 million into building that plant. At about the time they were getting ready to go to the bank, the previous administration said, "We are not going to let you reprocess because of the proliferation issue." Just the opposite really happened, Senator. We would be processing all the world's spent fuel rods at one time if the previous administration had let that operation go.

Senator **Warner**. We would have a measure of control.

Secretary **Edwards**. We would have known where everything this side of the Iron Curtain was, where every drop of plutonium was, where every spent fuel rod was, and where it was being transported. Today it chagrins me when I have to sign a piece of paper that permits U.S.-origin fuel which has been used in, say, a light water reactor in Japan, to be sent back to France or England to get it reprocessed.

Is it no wonder that the whole world looks toward France today as a leader of energy technology? When they get ready to buy a reactor, instead of buying American reactors, they are turning to France to buy French reactors because they are, in fact, aggressively moving ahead. It all sort of interchanges, and the French and the British are getting all these high technology jobs that we could have in this country reprocessing American origin fuel. It would also help us sell more American technology and equipment overseas.

Senator **Warner**. Mr. Secretary, I have been through that as you have obviously from your recitation this morning. I have studied all that history. We are here today in 1982 now. Who is to take this pendulum and begin to move it?

Secretary **Edwards**. Senator, I hesitate to say let's put money in reprocessing as the Federal Government because this administration is on record as being in favor of the private sector doing the reprocessing if at all possible. We have had discussions with some people, and we are trying to stimulate interest in this area of endeavor. The utility companies are willing to pay the cost of reprocessing if the Government will permit it. I hope that we can put together some sort of little private sector venture. Being realistic about it, I doubt very seriously whether we are going to be able to get the private sector to do it totally. I think maybe some private sector government corporation, corporate structure, may be necessary before we start doing that.

Senator WARNER. Can you be more precise as to a timeframe when we might be consulted by you with respect to some Federal role in this area?

Secretary EDWARDS. Senator, would tomorrow morning be too soon?

Senator WARNER. No. I will be happy to do that.

Secretary EDWARDS. I appreciate your help and support. This is one of the burning issues that we have to settle. Senator, I think that one of these bills is now being considered.

Senator WARNER. The bill this committee has reported.

Secretary EDWARDS. I think that's great. We could charge 1 mil per kilowatt-hour for all the nuclear industries, all the utilities that are generating electricity, nuclear energy. You can charge 1 mil per kilowatt-hour and apply that to a reprocessing, a burial and glassification. I think our estimates are that it will increase the average electric bill $8 or $9 per year.

I think, Senator, we have to do something like that to get this moving. I hope that bill will pass. Anything that you can do to help get a bill such as that through will be appreciated.

Senator WARNER. Turning to the actual disposal, there are two elements—one, the waste material, some kind of combination of glass, and second, the selection of sites for the deep deposit of this. On your report you have outlined some of the steps that you perceive we should take in 1983.

The question I have is are we moving ahead with the pace of this program adequately? Are there sufficient funds in here to meet the schedule in view of the backlog of plants now building up? In your judgment, is the pace of this program adequate?

Secretary EDWARDS. When we came aboard, we were talking about burying the first nuclear waste some time around the turn of the century. That drove me up the wall when we had the technology in place to do it, and I think they are now talking about burying the first nuclear waste in 1990.

I think we can shorten that to 1986 or 1987. I think it would be in the world's best interest and, particularly in America's best interest. We do have some recommendations. Once again, I must admit that this administration in setting their priorities, shaved off some of the costs of these things. The first thing we have to do in this administration, as you know, is address the economic problems and try to get the budget deficit down.

Senator WARNER. I understand that. Let me ask two quick questions. In your judgment, is the R. & D. complete on how this should be done?

Secretary EDWARDS. Yes.

Senator WARNER. Glassification and so forth?

Secretary EDWARDS. Yes.

Senator WARNER. And how much remains in terms of selection of sites? You said the program is currently focusing on four main geographic areas. Would you enumerate them?

Secretary EDWARDS. We are hoping to cut those down to two. Under the previous regulations and laws, we had to investigate, I think, several types of geological formations. We have been moving into these areas and drilling shafts into these different formations.

Senator **Warner**. How near are you to completing your analysis of the terminal facility?

Secretary **Edwards**. I think it is time to find a couple of appropriate satisfactory geological formations and bury it. If you want to monitor it for 50 years or a 100 years or 500 years, do it; but I don't think it is easy to do that. I think we have another technology in place now to start burying nuclear waste tomorrow if we have the money to do it.

Senator **East**. Senator Ford.

Senator **Ford**. Thank you, Mr. Chairman. The time is getting late and I will not prolong the session. I will submit some questions in writing, submit it to you for a response.

I might say to my good friend from Virginia, if he is interested in Barnwell, let me ask the Secretary these questions.

Last year you had zero budget for Barnwell in your budget, is that correct?

Secretary **Edwards**. That is correct.

Senator **Ford**. And we on the Senate floor, I think an amendment was for 13 million, and we put this in and wound up with somewhere about 11?

Secretary **Edwards**. I think that's about right.

Senator **Ford**. We did support that. Now you are asking for 10 million in research and development at Barnwell. Is it true that under the present operation that the private sector must tear that plant down or dismantle it in order to get the tax writeoff, unless they sell it?

Secretary **Edwards**. Senator, that is my understanding, yes.

Senator **Ford**. What is the 10 million for then?

Secretary **Edwards**. That is to keep it alive and also to continue some very viable research that will have to be done somewhere. They are doing the research there, to more or less keep this alive until we can get the private sector to come back in and maybe pick it up, or develop some governmental, private sector organization to pick it up.

Senator **Ford**. The Senator from Virginia understands this the way I do, and it is your fervent belief that we need to get into some kind of taking the spent rods and cleaning them, as I believe you said, and having a safer deposit or storage of the spent rods. Why in the world are we going to allow this to go down the drain if you picked up the Clinch River breeder, and you know, as I understand it, every time you recycle through that, you get a higher grade of plutonium, and it just doesn't make sense to me that you want to go down the drain, the private enterprise dismantle it so they get a tax writeoff. You know, that kind of a posture is almost as bad as zeroing out fossil. I said almost as bad!

Secretary **Edwards**. Senator, that is one of the reasons we have the $10 million in there this year; and you in your wisdom last year saw fit to put some money in this to carry out research.

Senator **Ford**. I don't think you objected to that.

Secretary **Edwards**. Personally, I didn't object to it, and I don't think the administration objected to it. I do think that, in my own personal opinion, it is just a matter of time until we have to get into the reprocessing business.

Senator **Ford**. There is no question about it.

Secretary **Edwards**. This is the cheapest way to get into it, and I hate to see it, because of procrastination on this issue and waiting for the private sector to get in. My philosophy now is a private sector-oriented philosophy. I want to tell you that, but since the private sector has been burned so badly, it is going to be difficult to get them to come back in there and pick up that reprocessing.

Senator **Ford**. It is ironic that we sit here and listen day in and day out for 14 months about the private sector, and we get the argument the private sector has been burned so much in nuclear energy and that goes back to the breeder basically, that you have got to fund nuclear.

A lot of people are going to be burned when you jerk the rug out from under them and research and fossil fuels isn't it, so you have got one sector that is burned, and you are getting ready to burn the other one, and you are not going to find the private sector interested in participating with Government, and there is only one agency way up the channel with any expertise, and that is the Department of Energy. Basically you admitted that you have saved all the money you can save, and everybody here admits that you have done a good job, including this Senator, of organizing the Department of Energy, that you have got it on the right track, but yet you are just here to dismantle all the functions.

Somehow it is kind of hard for me to see that you are burning both those parts of the private sector that you want to get involved.

Secretary **Edwards**. We have staff who have been in conversation and negotiations trying to put together a private sector venture to pick this up and move ahead and reprocess.

Senator **Ford**. You are putting $10 million into it, and you didn't ask for any last year, and $13 million seems to be the right figure, and apparently $10 million is the right one this time to get that done.

Let me just very quickly, Mr. Chairman, get in two questions. In reviewing the Department of Energy proposal for fiscal year 1983, it appears you are initiating, as we have all said, a phaseout of fossil energy R. & D., and Congress last year appropriated $566 million for fiscal year 1982 which we are now in for fossil energy R. & D. compared to your 1983 request of 106.9 million.

Now somewhere around 90 percent of the energy produced in this Nation is being provided by fossil energy, and I think the projections are around 70 percent for the year 2000. Therefore, in my opinion, and in the opinion of a lot of others, there are a lot of legitimate national policy issues involved in the apparent abandonment of long-term fossil energy R. & D. Press reports, Mr. Secretary, indicate that initially DOE requested $305 million for fiscal year 1983 from OMB as a minimum budget, as a minimum budget, but was allowed only, what, approximately $107 million. DOE appealed the entire $305 million back to OMB, during the negotiation on the final fiscal year 1983 budget.

Now let me ask you this question. Is my statement right on the $305 million minimum?

Secretary **Edwards**. I think it is about right, yes, sir.

Senator Ford. Therefore, since DOE had determined with your people that a minimum viable, long-term fossil energy R. & D. program was $305 million, will you tell me for the record the impact of cutting the budget $106.9 million?

Secretary Edwards. Senator, certainly there is some impact on some of our research and development. It was a situation where, together with OMB, we were trying to compromise and set priorities. As we came out of it, we settled on $107 million.

We will be glad, if you would permit me, to submit it for the record.

Senator Ford. I would be glad for you to do that.

Secretary Edwards. The difference between the two, rather than trying to recite it from memory here, so we will do that if you will permit me.

[Subsequent to the hearing the Department of Energy supplied the following:]

FOSSIL ENERGY R&D

Question : In reviewing the Department of Energy's proposed FY 1983 budget, it appears you are initiating a phasing out of Fossil Energy R&D. Congress appropriated $566 million in FY 1982 for Fossil Energy R&D compared to your FY 1983 request of $106.9 million. Fossil Energy currently provides 90 percent of this nation's energy and will provide over 70 percent in the year 2000. Therefore, there are legitimate national policy issues involved in an apparent abandonment of long-term Fossil Energy R&D. Press reports indicate that initially DOE requested $305 million in FY 1983 from OMB as a minimum budget, but was allowed only $107 million. DOE appealed the entire $305 million back to OMB during negotiations on the final FY 1983 budget.

a. Therefore,, since DOE had determined that a minimum viable long-term Fossil Energy R&D program was $305 million; will you tell me the impact of cutting the budget to $106.9 million?

Answer: After the submission of the $305 million FY 1983 revised OMB budget, we worked closely with OMB to develop a revised Fossil Energy program which was responsive to the President's goal of reducing the Federal budget. The priorities and programs which emerged in this revised program continue to ensure that a core technology base program of research and development is maintained so that the private sector remains capable of introducing new fossil energy concepts into commercial practice well into the next century. Furthermore, I am satisfied that the Fossil Energy program proposed for FY 1983 adequately provides for necessary long-term, high-risk Federal R&D, while transferring to industry the task of further development of near-term technologies.

b. Would you provide for the Record, Mr. Secretary, a line item listing comparing the $305 million budget to the $107 million budget?

Answer: See attached.

c. What are the Administration's plans for long-term, high-risk Fossil Energy R&D? Will you cut the budget further in FY 1984?

Answer: The Department is committed to a continuing program for long-term, high-risk Fossil Enegy R&D as evidenced by the FY 1983 budget request of $106.9 million. As previously stated, considerable review and discussion with OMB concerning the Fossil Energy R&D program culminated in the decision to maintain a core technology base program. It would be presumptuous to project FY 1984 budget levels at this moment as the Fossil Energy program must be considered along with competing requirements in the context of re-examined priorities and affordability.

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DEPARTMENT OF ENERGY
FY 1983 O M B BUDGET REQUEST
(DOLLARS IN THOUSANDS)

BY APPROPRIATION
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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
992500	FOSSIL ENERGY				
50005	COAL				
50009	MINING R&D				
50010	OP. EXP. & CAP. EQUIP.	10.992	14.148	7.000	1.000
50011	CONSTRUCTION	-----	-----	-----	-----
50012	TOTAL, MINING R&D	10.992	14.148	7.000	1.000
50014	COAL LIQUEFACTION				
50015	OP. EXP. & CAP. EQUIP.	98.784	54.850	51.600	26.200
50016	CONSTRUCTION	129.600	-----	-----	-----
50017	TOTAL, COAL LIQUEFACTION	228.384	54.850	51.600	26.200
50019	SURFACE COAL GASIFICATION				
50020	OP. EXP. & CAP. EQUIP.	53.088	46.070	40.761	10.500
50021	CONSTRUCTION	-----	-----	-----	-----
50022	TOTAL, SURFACE COAL GASIFICATION	53.088	46.070	40.761	10.500
50024	UNDERGROUND COAL GASIFICATION				
50025	OP. EXP. & CAP. EQUIP.	8.256	12.800	700	700
50026	CONSTRUCTION	-----	-----	-----	-----
50027	TOTAL, UNDERGROUND COAL GASIFICATION	8.256	12.800	700	700
50029	ADV. RESEARCH & TECHNOLOGY DEV				
50030	OP. EXP. & CAP. EQUIP.	52.416	65.405	51.657	17.000
50031	CONSTRUCTION	3.840	-----	6.350	2.800
50032	TOTAL, ADV. RESEARCH & TECHNOLOGY DEV.	56.256	65.405	58.007	19.800
50069	CONTROL TECHNOLOGY & COAL PREPARATION				
50070	OP. EXP. & CAP. EQUIP.	25.152	27.585	29.000	8.600
50071	CONSTRUCTION	-----	-----	-----	-----
50072	TOTAL, CONTROL TECHNOLOGY & COAL PREPARATION	25.152	27.585	29.000	8.600

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DEPARTMENT OF ENERGY
FY 1983 O M B BUDGET REQUEST
(DOLLARS IN THOUSANDS)

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A/B CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/B REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
50074	HEAT ENGINES AND HEAT RECOVERY				
50075	OP. EXP. & CAP. EQUIP.	15.408	17.000	6.350	-----
50076	CONSTRUCTION.	-----	-----	-----	-----
50077	TOTAL, HEAT ENGINES AND HEAT RECOVERY.	15.408	17.000	6.350	-----
50084	COMBUSTION SYSTEMS				
50085	OP. EXP. & CAP. EQUIP.	41.044	46.990	23.895	6.500
50086	CONSTRUCTION.	-----	-----	-----	-----
50087	TOTAL, COMBUSTION SYSTEMS.	41.044	46.990	23.895	6.500
50094	FUEL CELLS				
50095	OP. EXP. & CAP. EQUIP.	34.464	29.545	22.500	9.500
50096	CONSTRUCTION.	-----	-----	-----	-----
50097	TOTAL, FUEL CELLS.	34.464	29.545	22.500	9.500
50109	MAGNETOHYDRODYNAMICS				
50110	OP. EXP. & CAP. EQUIP.	27.840	-----	-----	-----
50111	CONSTRUCTION.	-----	-----	-----	-----
50112	TOTAL, MAGNETOHYDRODYNAMICS.	27.840	-----	-----	-----
50120	PROGRAM DIRECTION - COAL.	12.019	12.520	12.350	8.000
50125	CAPITAL EQUIPMENT - COAL.	-----	-----	-----	-----
50130	SUBTOTAL, COAL.	512.903	326.910	252.163	90.800

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A/B CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A COND. REQ.
50135	PETROLEUM R&D				
50149	ENHANCED OIL RECOVERY				
50150	OP. EXP. & CAP. EQUIP.	15,456	21,700	18,700	5,800
50151	CONSTRUCTION	—	—	—	—
50152	TOTAL, ENHANCED OIL RECOVERY	15,456	21,700	18,700	5,800
50154	OIL SHALE				
50155	OP. EXP. & CAP. EQUIP.	18,192	19,730	16,757	6,300
50156	CONSTRUCTION	—	—	—	—
50157	TOTAL, OIL SHALE	18,192	19,730	16,757	6,300
50144	DRILLING AND OFFSHORE TECHNOLOGY				
50145	OP. EXP. & CAP. EQUIP.	—	—	—	—
50146	CONSTRUCTION	—	—	—	—
50147	TOTAL, DRILLING AND OFFSHORE TECHNOLOGY	—	—	—	—
50139	ADVANCED PROCESS TECHNOLOGY				
50140	OP. EXP. & CAP. EQUIP.	3,552	4,756	4,500	3,000
50141	CONSTRUCTION	—	—	—	—
50142	TOTAL, ADVANCED PROCESS TECHNOLOGY	3,552	4,756	4,500	3,000
50160	PROGRAM DIRECTION - PETROLEUM	1,555	1,620	1,600	1,000
50165	CAPITAL EQUIPMENT - PETROLEUM	2,160	—	—	—
50170	SUBTOTAL PETROLEUM	40,915	47,806	41,557	16,100

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DEPARTMENT OF ENERGY
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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
50175	GAS				
50179	UNCONVENTIONAL GAS RECOVERY				
50180	OP. EXP. & CAP. EQUIP....................................	11,520	14,100	11,000	-----
50181	CONSTRUCTION..	-----	-----	-----	-----
50182	TOTAL, UNCONVENTIONAL GAS RECOVERY..................	11,520	14,100	11,000	-----
50185	PROGRAM DIRECTION - GAS.............................	442	460	450	-----
50190	CAPITAL EQUIPMENT - GAS.............................	192	-----	-----	-----
50200	SUBTOTAL - GAS..	12,154	14,560	11,450	-----
50205	PROGRAM DIRECTION..	-----	-----	-----	-----
50209	FEASIBILITY STUDIES				
50210	OPERATING EXPENSES......................................	-----	-----	-----	-----
50211	PLANT AND CAPITAL EQUIPMENT..........................	-----	-----	-----	-----
50212	TOTAL, FEASIBILITY STUDIES............................	-----	-----	-----	-----
50219	LEASING PROGRAM				
50220	OP. EXP. & CAP. EQUIP....................................	-----	-----	-----	-----
50265	TOTAL, FOSSIL ENERGY....................................	565,972	389,276	305,170	106,900
50255	RESCISSION - FE (FE).....................................	-----	-----	-----	-----
50260	COST OUTLAY ADJUSTMENT - FE (FE)..................	-----	-----	-----	-----
50261	FY1981 DEFERRAL - FE (FE)............................	-19,500	-----	-----	-----
50262	FY1981 DEFERRAL - (FE) FE (CONST)..................	-129,600	-----	-----	-----
992590	TOTAL, FOSSIL ENERGY....................................	416,872	389,276	305,170	106,900
992591	(OP. EXP. & CAP. EQUIP.)................................	413,032	389,276	298,820	104,100
992592	(CONSTRUCTION)..	3,840	-----	6,350	2,800

Senator **Ford**. You make that as a line item listing the comparison of the $305 million and the $106 million, what you would have done with the $305 million and what you do with the $106.9 million. The $200 million reduction there almost makes up the Clinch River funding, the $245 million.

Secretary **Edwards**. I really wasn't looking at it in that light when we were discussing it, Senator.

Senator **Ford**. I was, though, you see. Now let me ask you how much gasoline is being dumped on the west coast of this country by China?

Secretary **Edwards**. I can't give you the figure on that, but some of it is happening, fortunately for the people on the west coast.

Senator **Ford**. What about the gulf area that they are threatening to bring it into now?

Secretary **Edwards**. I think that will be fortunate for the consumers if it brings the price down. There is some of that.

Senator **Ford**. Would you give me what data that you do have as it relates to what China is doing as to gasoline on the west coast and what potentially is on the gulf coast?

Secretary **Edwards**. I am sure we can get that for you.

[Subsequent to the hearing the Department of Energy supplied the following:]

Chinese Gasoline Imports

There has been a tenfold increase in the imports of Chinese gasoline since 1979 to the United States (mainly the West Coast). Commerce Department statistics* show $21.6 million of gasoline imports in 1979, $81.8 million dollars in 1980 and $228.2 million through November, 1981. For 1981, DOE data shows that Chinese gasoline exports to PAD 3 (Gulf Coast) and PAD 5 (West Coast) amounted to 163,408 barrels and 2,602,894 barrels, respectively.

As of late December, 1981 Chinese gasoline imports were selling for 99 cents a barrel on the West Coast, and then required another 1-1/2 to two cents a gallon to bring it up to U.S. octane standards. At the same time wholesale prices for gasoline in California ranged from $1.07 to $1.09 a gallon. Such imports account for less than two percent of the gasoline sold in California.

Analysts have indicated that imports of the leaded, regular-grade gasoline from China have played a significant role in the decline in wholesale and retail prices of about five cents a gallon in California since April.

The Chinese gasoline exporters have provided independent refiners and marketers with a ready supply of fuel. One independent refiner, Wickland Oil Company in Sacramento receives about a tankerload per month--160,000 barrels--for additional processing and retailing through its own network of Regal Stations in Northern California. The Chinese imports supply about 25 percent of Wickland's products.

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* Commerce Department data for gasoline include more than leaded gasoline (blending components, naptha, etc.) sales in their dollar figures.

Senator **Ford**. Are you aware of the No. 6 oil coming out of Canada into the Northeast at an extremely low price that is virtually undercutting all of our industry in that area?

Secretary **Edwards**. I know some of that is going on, yes, sir.

Senator **Ford**. Some of it?

Secretary **Edwards**. Yes, sir.

Senator **Ford**. Do you have any figure on that, Mr. Secretary, since you are aware of some of it? Do you have any idea what the Canadian Government is doing to us?

Secretary **Edwards**. Senator, I do not have those figures, and possibly they may be a little more difficult to get; but we will see what we can do.

[Subsequent to the hearing the Department of Energy supplied the following:]

Although first quarter data for 1982 from U.S. and Canadian agencies is not available on the exports of Canadian heavy fuel oil into the Northeast, there is no indication from State and regional energy offices as well as private utilities and oil sellers that such sales are presenting problems in the region. For the past several years the normal U.S. market for such Canadian exports is into PAD 2 (the Midwest) and parts of PAD 1 such as the New England and Central Atlantic regions. In the past four years Canadian exports of heavy fuel oil to the New England area have averaged under 300,000 barrels a year; 4,500,000 barrels have been exported on the average annually to the Central Atlantic States since 1978. On the other hand, such exports to the Midwest have averaged around 10,000,000 barrels annually in the same period.

Senator **Ford**. Would Commerce maybe have them?

Secretary **Edwards**. I'm sure we have them.

Senator **Ford**. Two things bother me about the newspapers I have seen in the last couple of days. One is the President's budget is dead. We may not be talking about anything, and I am listening to quotes and reading quotes from your party and not mine, and it is very interesting to listen to that, and second, the Marshall plan reversed by Japan any interest in what they are doing and how they are doing it. You say they are taking our technology and sending it back over here and are clobbering the hell out of us.

What are we doing with our technology? It appears you are leaving it to the private sector and nothing is really going to happen. Nothing has happened. We have got, what, a $35 billion trade deficit with Japan?

Secretary **Edwards**. That has been going on a long time. That didn't just arrive in the last 14 months. For the record, I want to make that point.

Senator **Ford**. I understand it has been going on for a long time, but it appears that some changes are being made, that the country is not in as good shape today as it was a year ago.

Secretary **Edwards**. It is hard to manufacture automobiles and pay $20 an hour for the labor to manufacture automobiles and sell them to people who make $6 or $7 an hour. It is very difficult to do, and I will admit that.

Senator **Ford**. It is impossible to sell them at 18-percent interest.

Secretary **Edwards**. That's right, it is impossible. The reason they have 18-percent interest is because of that big expenditure—the Government always spends more than it takes in. We have got to control that.

Senator **Ford.** I noticed that the present deficit—I don't believe we are going to talk about past problems. I think the present problem is more relevant than any we have had.

Secretary **Edwards.** You can't take one little aspect of that problem. If we didn't have that present trillion-dollar debt, we wouldn't have to pay that $129 billion interest today, and we wouldn't have to worry about the debt.

Senator **Ford.** I tell you, Mr. Secretary, I didn't vote for it, and never have, and now I see the other side bellying up and voting for it. It is very interesting, but I have been consistent in voting against any of that. I don't think you can throw that one back at me. You might throw it at 99 others, some others in this room, but not this boy.

I think you talk about one item. I think, Mr. Secretary, and I say this in all sincerity, that you have put all your eggs, as Senator Melcher said, in one basket, and you are leaving others in the private sector that cannot carry it any more than the private sector can carry the nuclear part. Somewhere along the way we have got to have a balance in that, and with the increase in prices, the unemployment, people unable to buy, and the 70 percent of production rather than 100 percent, if we went back to 100 percent today, how much oil would we be importing? How much would we be importing? You can't brag about how little oil we are importing today because we are not producing it in this country.

If we were producing, we would be needing more oil, and therefore, when we start needing more oil, that puts us back up to 100 percent, puts us right back into the problem we have had in the past, and we are killing all the research that this country is involved in, almost every item except nuclear, and I want to tell you, you haven't had many Three Mile Islands from coal generating facilities, so you may have stood on a breeder reactor out in Idaho, but I'm not so sure that you might not be able to go to sleep at night.

I know you are a strong advocate, Jim, of nuclear, but there must be some interest in the 70 percent of the production of the energy in the year 2000 by fossil fuel. You have just got to look at the major effort, and somehow or another we keep just making coal boom and bust, and I remember the campaign of 1980. I didn't say it. What the man in the White House said is that coal should be the energy resource of this country, and I look at the budget, and it's gone, absolutely gone. Unless Congress can put something back in, and I think you could give us the leadership that is necessary to give us the kind of research and development that is necessary.

That is what is so ironic about it. I think we have got a fellow who could do the job, and we are cutting your leg off at your knees, and you agree with it. That's the sad part.

Secretary **Edwards.** Senator, I guess we can say that with regard to fossil fuels, the private sector has done such a good job on their own that they are increasing the sales and increasing the production. The only thing that limits the sale of coal is the market, as you well know; and I think it is more important to find new markets for coal than it is even to do basic research in coal that is being done by a lot of companies anyway in the private sector. So if we can get some of these harbors deepened and a sort of infrastructure built, and convince our friends and allies around the world that we are, in fact, going to be a dependable supplier of coal to the rest of the world and cut down the freight rates, I think that will help the coal industry much more than $200 or $300 million in research.

Senator **Ford**. Look what you did in the budget. In agriculture you just absolutely dismantled any ability to look after export of farm products, and that is a vehicle we need to sell, and you look what the farmer does to help us offset our balance of payments. It seems like, as I said a while ago, you are damaging the poor folks and the kids, and instead of looking to the future and the ability this country has. I was in Japan when Sputnik went up. The day before I was in America, and the next day they didn't know what it was, and Eisenhower at that day then launched a program to see that every child in this country who wanted an education got one because we fell behind, and we find the same procedure being involved today, the same procedure, and it looks like to me if we want to read history, you can't claim Franklin Roosevelt acted another way. That gets to be false after a while, and it seems to me that there is some areas in which we have to take a little stronger view of it.

I guess maybe I am as frustrated as my constituents at where you are leading us.

Secretary **Edwards**. They have been frustrated a long time, Senator.

Senator **Ford**. Not as much as they are recently because 60,000 who are out of work in Jefferson County are standing in line today for a paycheck at the unemployment office, and that didn't happen prior to last year.

Now you can say whatever you want to about that.

Secretary **Edwards**. The events that led up to that happened in the prior 8 or 10 years, Senator.

Senator **Ford**. You have heard the story about the three envelopes? You better start writing the third because my laryngitis is trying to explain to my constituents what is going on. It is very difficult.

Thank you, Mr. Chairman. I think I have been battling and hustling for a week, and I think I come back as frustrated as I have ever been with the direction they want us to go in and where they think they are being led.

Senator **East**. Thank you, Senator. Mr. Secretary, did you have any further comment? If not, we will thank you.

Secretary **Edwards**. Senator, I would say that I have enjoyed being here, but when they work you over like this, it really is a question whether I enjoyed it or not.

Senator **Ford**. The problem, as I have said before, is we have got a fellow who can make it work, and the problem is that he disagrees with some of us and we disagree with him, but there ought to be a balance. When you have got a fellow that can make it work, why don't you give him the tools to make it work?

He doesn't like what was suggested, but if we give it to him, he will make it work. I don't like sticking my fingers in saliva. I'm for it if you like to do it.

Secretary **Edwards**. You know, you don't get bitten as often doing that as you do in this job.

Senator **East**. Thank you.

[Whereupon, at 12:15 p.m., the hearing was adjourned.]

APPENDIX IV

RESPONSES FROM SECRETARY EDWARDS TO ADDITIONAL COMMITTEE QUESTIONS

JAMES A. MC CLURE, IDAHO, CHAIRMAN
MARK O. HATFIELD, OREG.
LOWELL P. WEICKER, JR., CONN.
PETE V. DOMENICI, N. MEX.
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DON NICKLES, OKLA.
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WENDELL H. FORD, KY.
HOWARD M. METZENBAUM, OHIO
SPARK M. MATSUNAGA, HAWAII
JOHN MELCHER, MONT.
PAUL E. TSONGAS, MASS.
BILL BRADLEY, N.J.

MICHAEL D. HATHAWAY, STAFF DIRECTOR
CHARLES A. TRABANDT, CHIEF COUNSEL
D. MICHAEL HARVEY, CHIEF COUNSEL FOR THE MINORITY

United States Senate
COMMITTEE ON
ENERGY AND NATURAL RESOURCES
WASHINGTON, D.C. 20510

February 24, 1982

The Honorable James B. Edwards
Secretary
Department of Energy
1000 Independence Avenue, S.W.
Room 7A257
Washington, D.C. 20585

Dear Mr. Secretary:

On behalf of the Committee on Energy and Natural Resources, I wish to express its appreciation for your contribution to our understanding of President Reagan's proposed budget for Fiscal Year 1983.

In connection with your testimony, enclosed are questions for the record. Your response by Friday, February 26, 1982 would be appreciated. Your response and any inquiries regarding this request should be directed to the attention of Richard D. Grundy, professional staff member at (224-2564).

Sincerely yours,

James A. McClure

James A. McClure
Chairman

JAM:nm

Questions for Secretary James B. Edwards
Energy Committee hearing on Department of Energy's
FY '83 budget request
February 23, 1982

1. Your proposed budget proposed merging "operating expenses" and "plant and capital equipment" appropriations accounts. For example, for the two Energy Supply Research and Development accounts. Similarly you would merge fossil operating expenses with fossil construction. What is the basis for eliminating this distinction? Are you proposing to no longer request multi-year authorizations of projects?

2. Will you provide the Committee with copies of the Holifield budget history tables?

(These tables have been provided to the Congress for many years and show the requests by the assistant Secretaries and by the Department to OMB.)

3. Will you provide the Committee with copies of the Department's planned expenditures for FY 1983 on a state-by-state basis?

HAVE ALWAYS BEEN FURNISHED IN PAST

Fossil Energy R&D

4. In reviewing the Department of Energy's proposed FY 1983 budget, it appears you are initiating a phasing out of Fossil Energy R&D. Congress appropriated $566 million in FY 1982 for fossil energy R&D compared to your FY 1983 request of $106.9 million. Fossil energy currently provides 90 percent of this nation's energy and will provide over 70 percent in the year 2000. Therefore, there are legitimate national policy issues involved in an apparent abandonment of long-term Fossil Energy R&D. Press reports indicate that initially DOE requested $305 million in FY 1983 from OMB as a minimum budget, but was allowed only $107 million. DOE appealed the entire $305 million back to OMB during negotiations on the final FY 1983 budget.

a. Therefore, since DOE had determined that a minimum viable long-term Fossil Energy R&D program was $305 million; will you tell me the impact of cutting the budget to $106.9 million?

b. Would you provide for the Record, Mr. Secretary, a line item listing comparing the $305 million budget to the $107 million budget.

c. What are the Administration's plans for long-term, high-risk fossil energy R&D? Will you cut the budget further in FY 1984?

5. The administration accords a high priority to fill of the SPR. Is that right?

6. Now is a good time to be buying oil, since there is a surplus and the price is falling (from about $35.50 a year ago to $34.00 now). Is that right?

7. The administration bought oil for the SPR at a rate of about 300,000 b/d for fiscal year 1981. At what rate will you buy oil under the budget for fiscal year 1982?

8. At what rate will you buy oil under the budget proposed for fiscal year 1983?

9. Where will that leave us in terms of the total amount of oil in storage at the end of fiscal years 1982 and 1983?

10. How much oil in the SPR is "enough?"

Shouldn't we buy as much oil as we can now while there is an oversupply and the price of oil is falling?

11. Shouldn't we try to acquire capacity to store oil in every reasonable way possible? Have you looked into options such as leasing unused private storage space (either salt domes or on-shore tanks) and idle supertankers? What did you find?

ENERGY CONSERVATION

12. In November, 1981, the Research and Development Panel of the Energy Research Advisory Board submitted to your Deputy Secretary at his request a report on Federal Energy RD&D Priorities. Among the conclusions were:

> "The overall level of Federal R&D funding for conservation and improved utilization programs is too low in view of their potential for energy improvements and the inability of many important energy-consuming sectors to conduct R&D."

Since then you have proposed even greater cuts in energy research.

Do you disagree with the conclusions of the Energy Research Advisory Board?

13 Would you provide this Committee with a response to each of the conclusions of the Report of the Research and Development Panel?

Strategic Petroleum Reserve:

14. Mr. Secretary, your FY 1983 budget proposal will set the SPR program back an entire year (completion in 1990 instead of 1989); it proposes to defer 28% of FY 82 facilities construction funding; OMB cut your request for FY 83 facilities construction funds by more than half; and your oil procurement funding request represents a cut of 44% from last year. Oil prices are declining, oil is available, why are you cutting back this program? Isn't this a national security program?

OIL OVERCHARGES

15. Last year you promised that there would be no amnesty for oil companies who have overcharged consumers. Do you stand by that pledge? What are you doing to collect overcharges? Specifically, how does your budget reflect this commitment?

What do you plan to do with the money you recover as a result of settlements or prosecutions of overcharge cases?

ALTERNATIVE FINANCING OF SPR

16. What method does the administration consider the cheapest and the most appropriate for financing SPR oil purchases?

trategic Petroleum Reserve

17. In your confirmation hearing of January 12, 1981, Senator Johnston asked you "It is also evident that the capacity to store oil in the SPR must be increased at a substantially faster rate than is currently planned. Will you report to the Committee at the earliest convenience time concerning your plans to expand the capacity of the SPR?"

Your answer was: "I share your concern for expanded capacity and will report to the Committee on our plans as we develop them."

We are now severely capacity-limited in fill rates for the SPR. When are you going to address this issue?

SPR DRAWDOWN

18. To make the SPR credible, doesn't the administration have to have a policy for use of SPR in a disruption?

What is your policy?

NUCLEAR WASTE POLICY

19. Does the administration support S. 1662, the Nuclear Waste Policy Act reported by this Committee last session?

Does the administration favor attempting to establish a policy for the disposal of defense nuclear wastes in the context of S. 1662?

If so, what are your recommendations for such a policy?

Does the administration favor addressing the matter of nuclear fuel reprocessing in S. 1662? If so, what provisions would you want to include?

DOE Dismantlement

20. The Congressional Budget Office prepared at Sen. Domenici's request an analysis of the proposed DOE reorganization. The analysis, dated February 3, 1982, estimated that the reorganization of DOE would save approximately $3 million, but the cost of reorganization would cost approximately $3 million. Therefore, CBO concluded: "Reorganization, by itself, is unlikely to result in significant budget savings."

What do you estimate that the dismantlement of DOE would save? Could you provide us with a detailed itemization?

JAMES A. MC CLURE, IDAHO, CHAIRMAN
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United States Senate
COMMITTEE ON
ENERGY AND NATURAL RESOURCES
WASHINGTON, D.C. 20510

February 24, 1982

Honorable James B. Edwards
Secretary
U. S. DEPARTMENT OF ENERGY
1000 Independence Avenue, S.W.
Washington, D. C. 20585

Dear Mr. Secretary:

In order to complete the record to the hearing on February 23 on the President's Proposed Budget for the Department of Energy for Fiscal Year 1983, I am enclosing a set of questions to be answered by you in writing. I would appreciate receiving your response to these questions by Friday, February 26.

It is important that these answers be received by Friday so that they will be available to the Members of the Senate Committee on Energy and Natural Resources before we mark up the Committee's report to the Budget Committee on Tuesday, March 2nd.

Inquiries about this request and a copy of your response should be directed to Mike Harvey, Counsel for the Minority. His phone number is 224-9894.

Sincerely yours,

Henry M Jackson

Henry M. Jackson, U.S.S.

HMJ:bcg

Questions for Secretary Edwards
from Senator Henry M. Jackson

---

1. Will you provide the Committee with copies of the Holifield budget history tables? (These tables have been provided to the Congress for many years and show the requests by the assistant Secretaries and by the Department to OMB.)

2. Will you provide the Committee with copies of the Department's planned expenditures for FY 1983 on a state-by-state basis?

3. The February 21, 1982 issue of Business Week contains a story which alleges that Under Secretary Fiske has not yet divested himself of the stock holdings which he has in General Dynamics. What is the situation with regard to this matter? When do you expect it to be resolved?

4. Re: Power Marketing Administration

Mr. Secretary, your proposed budget recommends that the budget authority for the Power Marketing Administrations be increased from $532 million in FY 1982 to $712 million in FY 1983. The bulk of this increase is an estimated $175 million increase in the borrowing authority to be used by the Bonneville Power Administration.

- For what purposes do you intend that this increased borrowing authority be used? More specifically, how much of this additional borrowing would be done under the Federal Columbia River Transmission System Act, which authorizes borrowing "to assist in financing the construction, acquisition, and replacement of the transmission system...", and how much would be under the Pacific Northwest Electric Power Planning and Conservation Act, which established an increased borrowing authority "reserved for the purpose of providing funds for conservation and renewable resource loans and grants..."?

- On what basis did you (or will you) establish the amount of borrowing authority to be utilized for the purpose of providing funds for conservation and renewable resource loans and grants?

5. DOE DISMANTLEMENT

The following quotation is from the transcript of December 17, 1981 of your briefing to the Press on the Dismantlement of DOE:

> Q Secretary Edwards, since you're presiding over the demise of your own agency, what will be the savings? How many jobs? What is the money involved here?
>
> SECRETARY EDWARDS: The savings, we have ramped down the department rather extensively. We've stream-lined it. We've really dismantled the regulatory aspects and if we are able to dismantle the regulatory aspects of natural gas, which we hope that we will be able to do in the next session. The savings will be rather extensive. Now so far as specific savings go, there will be some administrative savings beyond that.
>
> But I think that one of the most important aspects of this whole redistribution process is that, like most government agencies, if left alone they will be allowed to spring up and grow like topsy and if we replace this within another department, I think that it will save some monies in so far as administrative costs go, but the majority of the savings we will have accomplished by the end of going into the end of '82 and into '83, for example.
>
> Q So why not keep it if you have already streamlined it so that it is lean?
>
> SECRETARY EDWARDS: So that it will not have that chance to grow and proliferate again, and we need to de-emphasize the role of government in energy, really, and let the private market work, and this is fulfilling the President's promise and it also brings about significant savings too.

Mr. Secretary, isn't this the real reason the Administration is proposing to dismantle DOE, to ensure that Government cannot have a role in domestic energy policy?

6. DOE DISMANTLEMENT

The Congressional Budget Office prepared at Senator Domenici's request an analysis of the proposed DOE reorganization. The analysis, dated February 3, 1982, estimated that the reorganization of DOE would save approximately $3 million, but the cost of reorganization would cost approximately $3 million. Therefore, CBO concluded:

> "Reorganization, by itself, is unlikely to result in significant budget savings."

What do you estimate that the dismantlement of DOE would save? Could you provide us with a detailed itemization?

7. APPLIANCE EFFICIENCY STANDARDS

In your nomination hearing on January 12, 1981, Senator Jackson asked you when the Department of Energy would issue the appliance efficiency standards which the law required to be issued by January 2, 1981. Your answer was:

> "I fully intend to comply with the requirements of the law pertaining to appliance efficiency standards."

Have you issued those standards as the law requires? How have you complied with the law?

8. STRATEGIC PETROLEUM RESERVE

In your confirmation hearing of January 12, 1981, Senator Johnston asked you: "It is also evident that the capacity to store oil in the SPR must be increased at a substantially faster rate than is currently planned. Will you report to the Committee at the earliest convenient time concerning your plans to expand the capacity of the SPR?" Your answer was:

> "I share your concern for expanded capacity and will report to the Committee on our plans as we develop them."

We are now severely capacity-limited in fill rates for the SPR. When are you going to address this issue?

9. ENERGY CONSERVATION

Your budget books devote a total of three sentences to your justifying your proposal to eliminate the State and Local Assistance programs under the Energy Conservation line item. These programs include low-income weatherization and grants to States for weatherizing schools and hospitals and funding State energy offices.

> "There is clear evidence that the market place has responded favorably to higher energy prices. Oil price decontrol and the President's economic recovery proposals will accelerate this trend. Therefore, further Federal expenditures for energy conservation grant programs are unnecessary."

Would you explain how it is that higher energy prices make the low-income weatherization program unnecessary? Is your proposal to eliminate the EPCA and ECPA grants to state and local governments consistent with the new Federalism? How?

10. ENERGY CONSERVATION

In November, 1981, the Research and Development Panel of the Energy Research Advisory Board submitted to your Deputy Secretary at his request a report on Federal Energy RD&D Priorities. Among the conclusions were:

> "The overall level of Federal R&D funding for conservation and improved utilization programs is too low in view of their potential for energy improvements and the inability of many important energy-consuming sectors to conduct R&D."

Since then you have proposed even greater cuts in energy conservation research. Do you disagree with the conclusions of the Energy Research Advisory Board?

Would you provide this Committee with a response to each of the conclusions of the Report of the Research and Development Panel?

11. STRATEGIC PETROLEUM RESERVE:

Mr. Secretary, your FY 1983 budget proposal will set the SPR program back an entire year (completion in 1990 instead of 1989); it proposes to defer 28% of FY 82 facilities construction funding; OMB cut your request for FY 83 facilities construction funds by more than half; and your oil procurement funding request represents a cut of 44% from last year. Oil prices are declining, oil is available, why are you cutting back this program? Isn't this a national security program?

12. OIL OVERCHARGES

Last year you promised that there would be no amnesty for oil companies who have overcharged consumers. Do you stand by that pledge? What are you doing to collect overcharges? Specifically, how does your budget reflect this commitment?

What do you plan to do with the money you recover as a result of settlements or prosecutions of overcharge cases?

13. SPR DRAWDOWN

To make the SPR credible, doesn't the administration have to have a policy for use of SPR in a disruption? What is your policy?

14. PRIVATE STOCKPILING OF OIL

What is your estimate of the annual carrying charge associated with storing a barrel of oil? Do you think private companies will be willing to pay this sort of cost year after year to protect themselves from a future disruption?

What is happening to private stocks now? Are they increasing or decreasing? By how much?

15. ALTERNATIVE FINANCING OF SPR

What method does the administration consider the cheapest and the most appropriate for financing SPR oil purchases?

16. NUCLEAR WASTE POLICY

Does the administration support S. 1662, the Nuclear Waste Policy Act reported by this Committee last session?

Does the administration favor attempting to establish a policy for the disposal of defense nuclear wastes in the context of S. 1662?

If so, what are your recommendations for such a policy?

Does the administration favor addressing the matter of nuclear fuel reprocessing in S. 1662? If so, what provisions would you want to include?

17. SPR FILL

In your opinion, is now a good time to be buying oil for the SPR, since there is a worldwide surplus and the price is falling (from about $35.50 a year ago to about $34.00 now)?

The administration bought oil for the SPR at a rate of about 300,000 b/d for fiscal year 1981. At what rate did you buy oil under the budget for the first quarter of fiscal year 1982? What rate do you project for the second quarter of fiscal year 1982? The second half of fiscal year 1982?

At what rate will you buy oil under the budget proposed for fiscal year 1983?

Where will that leave us in terms of the total mount of oil in storage at the end of fiscal years 1982 and 1983?

17. SPR FILL (continued)

How much oil in the SPR is "enough"?

Shouldn't we buy as much oil as we can how while there is an oversupply and the price of oil is falling?

Shouldn't we try to acquire capacity to store oil in every reasonable way possible? Have you looked into options such as leasing unused private storage space (either salt domes or on-shore tanks) and idle supertankers? What did you find?

Please provide the Committee with your best estimate of the costs of leased storage of various kinds. What would be the estimated facilities costs associated with maintaining the SPR fill rate at 300,000 b/d in fiscal years 1982 and 1983?

18. SPR

Mr. Secretary, in your statement before the Committee you repeatedly stated that the fill rate for the Strategic Petroleum Reserve will be greater in FY 1983 than it was in FY 1982. Isn't it true that all but 7 million barrels of oil to be delivered in FY 1983 was or will be purchased with FY 1982 funds? Therefore, isn't it true that based on a daily rate of fill, the FY 1983 proposed budget will purchase only 19,000 barrels per day for delivery in FY 1983 and the balance of the FY 1983 budget will be used to purchase oil for delivery in FY 1984? Isn't it true that if the proposed FY 1983 budget were the exclusive source of funds to purchase

18. SPR (continued)

oil for delivery in FY 1983, you could not achieve your projected fill rate for FY 1983?

19. GAO Report on SPR

The GAO in its report, "Strategic Petroleum Reserve: Substantial Progress Made, but Capacity and Oil Quality Concerns Remain", issued on December 31, 1981, recommended:

-- Evaluate options for achieving an average annual fill rate of 300,000 barrels per day assuming the planned and other SPR sizes. The evaluation, which should be available for fiscal year 1983 congressional budget deliberations, should assess costs and benefits of alternatives to constructing new underground storage facilities, including such options as leasing existing storage capacity.

Moreover, in the answers to prepared questions from Senator Jackson to Secretary Edwards from the hearing of December 10, 1981, before a Government Affairs Subcommittee, you replied:

> "Neither the original nor revised requests for FY 1983 on-budget SPR facilities funding include resources specifically for temporary leased storage facilities to permit the acquisition of oil in addition to the fill of permanent storage facilities."

Please provide for the Committee this evaluation which GAO recommended that you provide to the Congress.

In addition, if DOE commented on this GAO report, please provide these comments to the Committee.

POSTHEARING QUESTIONS

from

HONORABLE JAMES A. McCLURE

for the

FEBRUARY 23, 1982 HEARING

before the

COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE

WITNESS SECRETARY JAMES B. EDWARDS

QUESTION 1: Your proposed budget proposed merging "operating expenses" and "plant and capital equipment" appropriations account. For example, for the two Energy Supply Research and Development accounts. Similarly you would merge fossil operating expenses with fossil construction. What is the basis for eliminating this distinction? Are you proposing to no longer request multi-year authorizations of projects?

ANSWER: The merger of operating expense and plant and capital equipment accounts simply represents an effort to reduce the number of appropriation accounts and thereby facilitate program execution. The proposed merger does not affect the level of detail we provide to the Congress. We would submit justifications and track execution in the same manner as in the past. Likewise, these proposed mergers would have no impact upon the Department's proposed authorization bills.

Questions 2 and 3

Question 2: Will you provide the Committee with copies of the Holifield budget history tables?

Answer: Multiple copies of the Holifield budget history tables were delivered to the Committee office on or about February 11, 1982. An additional copy for your personal use is enclosed.

Question 3: Will you provide the Committee with copies of the Department's planned expenditures for FY 1983 on a state-by-state basis?

Answer: The Cost-Py-State tables have just been completed and were delivered to the Committee on or about February 25, 1982. An additional copy for your personal use is enclosed.

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
991000	ATOMIC ENERGY				
10009	INERTIAL CONFINEMENT FUSION				
10010	OPERATING EXPENSES..................................	122,362	161,550	124,750	105,000
10011	PLANT AND CAPITAL EQUIPMENT........................	86,700	77,350	31,750	13,750
10012	TOTAL, INERTIAL CONFINEMENT FUSION..................	209,062	238,900	156,500	118,750
10019	RESEARCH AND DEVELOPMENT AND TESTING				
10020	OPERATING EXPENSES..................................	934,300	1,133,000	1,051,700	1,075,000
10021	PLANT AND CAPITAL EQUIPMENT........................	154,000	375,300	118,600	116,800
10022	TOTAL, RESEARCH AND DEVELOPMENT AND TESTING..........	1,088,300	1,508,300	1,170,300	1,191,800
10029	PRODUCTION AND SURVEILLANCE				
10030	OPERATING EXPENSES..................................	1,276,156	1,628,800	1,562,110	1,562,400
10031	PLANT AND CAPITAL EQUIPMENT........................	318,300	655,400	499,200	483,900
10032	TOTAL, PRODUCTION AND SURVEILLANCE..................	1,594,456	2,284,200	2,061,310	2,046,300
10040	PROGRAM DIRECTION - DEFENSE PROGRAMS................	50,238	61,145	54,100	51,291
10049	VERIFICATION AND CONTROL TECHNOLOGY				
10050	OPERATING EXPENSES..................................	48,900	75,100	54,400	52,400
10051	PLANT AND CAPITAL EQUIPMENT........................	1,100	2,900	1,500	1,500
10052	TOTAL, VERIFICATION AND CONTROL TECHNOLOGY...........	50,000	78,000	55,900	53,900
10059	MATERIALS PRODUCTION				
10060	OPERATING EXPENSES.:................................	598,780	968,576	762,710	762,900
10061	PLANT AND CAPITAL EQUIPMENT........................	305,600	610,551	314,150	313,950
10062	TOTAL, MATERIALS PRODUCTION.........................	904,380	1,579,127	1,076,860	1,076,850
10064	DEFENSE NUCLEAR WASTE				
10065	OPERATING EXPENSES..................................	245,028	416,704	300,619	285,929
10066	PLANT AND CAPITAL EQUIPMENT........................	119,865	462,029	252,911	231,841
10067	TOTAL, DEFENSE NUCLEAR WASTE........................	364,893	878,733	553,530	517,770
10069	NUCLEAR MATERIALS SECURITY & SAFEGUARDS DEV				
10070	OPERATING EXPENSES..................................	43,519	61,200	45,800	43,160
10071	PLANT AND CAPITAL EQUIPMENT........................	3,700	9,900	4,600	4,200
10072	TOTAL, NUCLEAR MATERIALS SECURITY & SAFEGUARDS DEV...	47,219	71,100	50,400	47,360

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
10079	SECURITY INVESTIGATIONS				
10080	OPERATING EXPENSES..................................	23,600	33,213	26,000	26,000
40154	NAVAL REACTORS DEVELOPMENT				
40155	OPERATING EXPENSES..................................	277,120	371,600	331,600	326,760
40156	PLANT AND CAPITAL EQUIPMENT.........................	82,000	132,000	115,000	49,000
40157	TOTAL, NAVAL REACTORS DEVELOPMENT...................	359,120	503,600	446,600	375,760
10094	UNDISTRIBUTED - DP (AEDA)...........................	-----	-----	-----	-----
10099	GENERAL REDUCTION - DP (AEDA).......................	-----	-----	-----	-----
10103	COST OUTLAY ADJUSTMENT - DP (AEDA)..................	-----	-----	-----	-----
40190	COST OUTLAY ADJUSTMENT - NE (AEDA)..................	-----	-----	-----	-----
991090	TOTAL, ATOMIC ENERGY................................	4,691,268	7,236,318	5,651,500	5,505,781
991091	(OPERATING EXPENSES)................................	3,620,003	4,910,888	4,313,789	4,290,840
991092	(PLANT AND CAPITAL EQUIPMENT).......................	1,071,265	2,325,430	1,337,711	1,214,941

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
991500	GENERAL SCIENCE				
20044	LIFE SCIENCES RESEARCH AND NUCLEAR MEDICINE APP .				
20045	OPERATING EXPENSES................................	45,386	51,800	32,600	37,320
20046	PLANT AND CAPITAL EQUIPMENT.......................	2,000	2,200	1,700	1,700
20047	TOTAL, LIFE SCIENCES RESEARCH AND NUCLEAR MEDICINE AP	47,386	54,000	34,300	39,020
20009	HIGH ENERGY PHYSICS				
20010	OPERATING EXPENSES................................	269,200	323,300	277,000	331,000
20011	PLANT AND CAPITAL EQUIPMENT.......................	95,300	129,700	83,000	98,000
20012	TOTAL, HIGH ENERGY PHYSICS...........................	364,500	453,000	360,000	429,000
20019	NUCLEAR PHYSICS				
20020	OPERATING EXPENSES................................	112,371	125,500	106,300	113,350
20021	PLANT AND CAPITAL EQUIPMENT.......................	21,510	32,300	15,900	17,600
20022	TOTAL, NUCLEAR PHYSICS...............................	133,881	157,800	122,200	130,950
20030	HIGH ENERGY AND NUCLEAR PHYSICS PROG. DIRECTION (GS).	1,935	1,800	2,000	2,000
20130	GENERAL REDUCTION - ER (GS)........................	-----	-----	-----	-----
20140	COST OUTLAY ADJUSTMENT - ER (GS)...................	-----	-----	-----	-----
20151	FY1981 DEFERRAL - ER(GS)............................	-5,000	-----	-----	-----
991590	TOTAL, GENERAL SCIENCE................................	542,702	666,600	518,500	600,970
991591	(OPERATING EXPENSES).............................	423,892	502,400	417,900	483,670
991592	(PLANT AND CAPITAL EQUIPMENT).....................	118,810	164,200	100,600	117,300

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
992000	ENERGY SUPPLY R&D				
70010	SOLAR ENERGY				
70020	SOLAR APPLICATIONS FOR BUILDINGS				
70029	ACTIVE SOLAR HEATING AND COOLING				
70030	OPERATING EXPENSES	11,000	10,000	-----	-----
70031	PLANT AND CAPITAL EQUIPMENT	500	-----	-----	-----
70032	TOTAL, ACTIVE SOLAR HEATING AND COOLING	11,500	10,000	-----	-----
70039	PASSIVE SOLAR HEATING AND COOLING				
70040	OPERATING EXPENSES	10,100	11,000	-----	-----
70041	PLANT AND CAPITAL EQUIPMENT	500	-----	-----	-----
70042	TOTAL, PASSIVE SOLAR HEATING AND COOLING	10,600	11,000	-----	-----
70049	PHOTOVOLTAIC ENERGY SYSTEMS				
70050	OPERATING EXPENSES	70,000	48,000	33,000	27,035
70051	PLANT AND CAPITAL EQUIPMENT	4,000	-----	-----	-----
70052	TOTAL, PHOTOVOLTAIC ENERGY SYSTEMS	74,000	48,000	33,000	27,035
70060	PROGRAM DIRECTION	-----	-----	-----	-----
70070	SUBTOTAL, SOLAR APPLICATIONS FOR BUILDINGS	96,100	69,000	33,000	27,035
70080	SOLAR APPLICATION FOR INDUSTRY				
70089	SOLAR THERMAL ENERGY SYSTEMS				
70090	OPERATING EXPENSES	50,650	39,500	19,000	17,625
70091	PLANT AND CAPITAL EQUIPMENT	2,300	-----	1,000	400
70092	TOTAL, SOLAR THERMAL ENERGY SYSTEMS	52,950	39,500	20,000	18,025
70099	BIOMASS ENERGY SYSTEMS				
70100	OPERATING EXPENSES	19,500	17,050	7,300	6,605
70101	PLANT AND CAPITAL EQUIPMENT	1,000	-----	-----	-----
70102	TOTAL, BIOMASS ENERGY SYSTEMS	20,500	17,050	7,300	6,605
70110	PROGRAM DIRECTION	-----	-----	-----	-----
70120	SUBTOTAL, SOLAR APPLICATIONS FOR INDUSTRY	73,450	56,550	27,300	24,630
70130	SOLAR APPLICATION FOR POWER				
70139	WIND ENERGY SYSTEMS				
70140	OPERATING EXPENSES	33,700	22,100	13,900	5,385
70141	PLANT AND CAPITAL EQUIPMENT	700	-----	100	100
70142	TOTAL, WIND ENERGY SYSTEMS	34,400	22,100	14,000	5,485

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
70149	OCEAN ENERGY SYSTEMS				
70150	OPERATING EXPENSES................................	18,300	-----	-----	-----
70151	PLANT AND CAPITAL EQUIPMENT.......................	500	-----	-----	-----
70152	TOTAL, OCEAN ENERGY SYSTEMS.......................	18,800	-----	-----	-----
70160	PROGRAM DIRECTION.................................	-----	-----	-----	-----
70170	SUBTOTAL, SOLAR APPLICATIONS FOR POWER...............	53,200	22,100	14,000	5,485
70180	ALCOHOL FUELS				
70189	PRODUCTION INCENTIVES				
70190	OPERATING EXPENSES................................	-----	11,000	6,000	2,940
70191	PLANT AND CAPITAL EQUIPMENT.......................	-----	-----	-----	-----
70192	TOTAL, PRODUCTION INCENTIVES......................	-----	11,000	6,000	2,940
70199	TECHNOLOGY DEVELOPMENT AND UTILIZATION				
70200	OPERATING EXPENSES................................	10,000	-----	-----	-----
70201	PLANT AND CAPITAL EQUIPMENT.......................	-----	-----	-----	-----
70202	TOTAL, TECHNOLOGY DEVELOPMENT AND UTILIZATION.......	10,000	-----	-----	-----

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
70209	MARKET DEVELOPMENT				
70210	OPERATING EXPENSES....................................	-----	-----	-----	-----
70211	PLANT AND CAPITAL EQUIPMENT...........................	-----	-----	-----	-----
70212	TOTAL, MARKET DEVELOPMENT.............................	-----	-----	-----	-----
70219	MANAGEMENT AND PROGRAM DIRECTION				
70220	OPERATING EXPENSES....................................	-----	-----	-----	-----
70221	PLANT AND CAPITAL EQUIPMENT...........................	-----	-----	-----	-----
70222	TOTAL, MANAGEMENT AND PROGRAM DIRECTION............	-----	-----	-----	-----
70230	PROGRAM DIRECTION - ALCOHOL FUELS...................	-----	-----	-----	-----
70240	SUBTOTAL, ALCOHOL FUELS...............................	10,000	11,000	6,000	2,940
70250	OTHER SOLAR ENERGY				
70259	INTERNATIONAL SOLAR ENERGY PROGRAM				
70260	OPERATING EXPENSES....................................	4,000	10,000	9,500	9,500
70261	PLANT AND CAPITAL EQUIPMENT...........................	-----	-----	-----	-----
70262	TOTAL, INTERNATIONAL SOLAR ENERGY PROGRAM...........	4,000	10,000	9,500	9,500
70269	SOLAR INFORMATION SYSTEMS				
70270	OPERATING EXPENSES....................................	6,700	6,000	1,500	-----
70271	PLANT AND CAPITAL EQUIPMENT...........................	-----	-----	-----	-----
70272	TOTAL, SOLAR INFORMATION SYSTEMS....................	6,700	6,000	1,500	-----
70279	SOLAR ENERGY RESEARCH INSTITUTE				
70280	OPERATING EXPENSES....................................	-----	24,000	-----	-----
70281	PLANT AND CAPITAL EQUIPMENT...........................	-----	-----	-----	-----
70282	TOTAL, SOLAR ENERGY RESEARCH INSTITUTE..............	-----	24,000	-----	-----

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70283	PROGRAM SUPPORT.......................................	3,463	- -----	-----	500
70290	PROGRAM DIRECTION - OTHER SOLAR ENERGY..............	4,000	6,980	4,837	2,146
70291	SOLAR RESERVE ACCOUNT................................	6,000	-----	-----	-----
70300	SUBTOTAL, OTHER SOLAR ENERGY.........................	24,163	46,980	15,837	12,146
70310	SOLAR (ESRD)............................(83 STRUCTURE)	-----.	-----	-----	-----
70320	SUBTOTAL, SOLAR ENERGY...............................	256,913	205,630	96,137	72,236
70529	GEOTHERMAL				
70530	OPERATING EXPENSES................................	44,136	42,000	20,265	9,560
70531	PLANT AND CAPITAL EQUIPMENT.......................	9,418	-----	550	250
70532	TOTAL, GEOTHERMAL....................................	53,554	42,000	20,815	9,810
70539	HYDROPOWER				
70540	OPERATING EXPENSES................................	3,000	600	-----	-----
70541	PLANT AND CAPITAL EQUIPMENT.......................	-----	-----	-----	-----
70542	TOTAL, HYDROPOWER....................................	3,000	600	-----	-----
40004	CONVERTER REACTOR SYSTEMS				
40005	OPERATING EXPENSES................................	85,807	107,573	43,683	25,983
40006	PLANT AND CAPITAL EQUIPMENT.......................	10,523	12,100	6,000	6,000
40007	TOTAL, CONVERTER REACTOR SYSTEMS.....................	96,330	119,673	49,683	31,983
40024	COMMERCIAL NUCLEAR WASTE				
40025	OPERATING EXPENSES................................	200,641	353,933	245,200	70,269
40026	PLANT AND CAPITAL EQUIPMENT.......................	9,317	49,023	21,100	10,200
40027	TOTAL, COMMERCIAL NUCLEAR WASTE......................	209,958	402,956	266,300	80,489
40059	SPENT NUCLEAR FUEL				
40060	OPERATING EXPENSES................................	-----	-----	-----	-----
40061	PLANT AND CAPITAL EQUIPMENT.......................	-----	-----	-----	-----
40062	TOTAL, SPENT NUCLEAR FUEL............................	-----	-----	-----	-----

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40064	ADVANCED NUCLEAR SYSTEMS				
40065	OPERATING EXPENSES................................	34,728	41,636	28,826	28,826
40066	PLANT AND CAPITAL EQUIPMENT.......................	2,846	3,600	1,800	1,800
40067	TOTAL, ADVANCED NUCLEAR SYSTEMS..........................	37,574	45,236	30,626	30,626
40069	NUCLEAR FUEL CYCLE				
40070	OPERATING EXPENSES................................	45,552	94,056	63,300	52,775
40071	PLANT AND CAPITAL EQUIPMENT.......................	7,160	6,600	6,950	6,500
40072	TOTAL, NUCLEAR FUEL CYCLE................................	52,712	100,656	70,250	59,275
40079	BREEDER REACTOR SYSTEMS				
40080	OPERATING EXPENSES................................	562,910	669,857	596,349	541,093
40081	PLANT AND CAPITAL EQUIPMENT.......................	84,442	88,300	76,900	36,400
40082	TOTAL, BREEDER REACTOR SYSTEMS...........................	647,352	758,157	673,249	577,493
40089	NUCLEAR FUEL REPROCESSING R&D				
40090	OPERATING EXPENSES................................	-----	-----	-----	-----
40091	PLANT AND CAPITAL EQUIPMENT.......................	-----	-----	-----	-----
40092	TOTAL, NUCLEAR FUEL REPROCESSING R&D..................	-----	-----	-----	-----
40099	REMEDIAL ACTION				
40100	OPERATING EXPENSES................................	42,654	85,989	48,900	48,900
40101	PLANT AND CAPITAL EQUIPMENT.......................	775	1,400	1,400	1,400
40102	TOTAL, REMEDIAL ACTION...................................	43,429	87,389	50,300	50,300
40169	PROGRAM SUPPORT				
40170	OPERATING EXPENSES................................	-----	-----	-----	-----
40171	PLANT AND CAPITAL EQUIPMENT.......................	-----	-----	-----	-----
40172	TOTAL, PROGRAM SUPPORT...................................	-----	-----	-----	-----
40174	INVENTORY ASSIGNMENTS				
40175	OPERATING EXPENSES................................	-----	-----	-----	-----
40176	PLANT AND CAPITAL EQUIPMENT.......................	-----	-----	-----	-----
40177	TOTAL, INVENTORY ASSIGNMENTS.............................	-----	-----	-----	-----
20049	MAGNETIC FUSION				
20050	OPERATING EXPENSES................................	292,700	560,100	356,100	358,600
20051	PLANT AND CAPITAL EQUIPMENT.......................	161,104	-----	89,000	85,500
20052	TOTAL, MAGNETIC FUSION...................................	453,804	560,100	445,100	444,100

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70549	ELECTRIC ENERGY SYSTEMS				
70550	OPERATING EXPENSES................................	20,100	5,860	296	-----
70551	PLANT AND CAPITAL EQUIPMENT......................	400	-----	-----	-----
70552	TOTAL, ELECTRIC ENERGY SYSTEMS......................	20,500	5,860	296	-----
70329	ENERGY STORAGE SYSTEMS				
70330	OPERATING EXPENSES................................	36,900	34,100	9,455	-----
70331	PLANT AND CAPITAL EQUIPMENT......................	1,100	-----	200	-----
70332	TOTAL, ENERGY STORAGE SYSTEMS......................	38,000	34,100	9,655	-----
30009	OVERVIEW AND ASSESSMENT				
30010	OPERATING EXPENSES...............................	45,453	66,400	45,000	32,145
30011	PLANT AND CAPITAL EQUIPMENT......................	4,000	5,400	1,760	1,500
30012	TOTAL, OVERVIEW AND ASSESSMENT......................	49,453	71,800	46,760	33,645
20099	BIOLOGICAL AND ENVIRONMENTAL RESEARCH				
20100	OPERATING EXPENSES................................	148,428	152,200	125,200	118,400
20101	PLANT AND CAPITAL EQUIPMENT......................	13,700	12,700	10,700	8,500
20102	TOTAL, BIOLOGICAL AND ENVIRONMENTAL RESEARCH.........	162,128	164,900	135,900	126,900
30014	PROGRAM DIRECTION				
30015	OPERATING EXP. - OVERVIEW & ASSESSMENT (EPS&EP)..	7,895	8,800	7,600	5,350
20104	OPERATING EXP. - BIOLOG. & ENV. RES. (ER)........	2,862	2,900	2,900	2,945
30017	TOTAL, PROGRAM DIRECTION............................	10,757	11,700	10,500	8,295
20059	BASIC ENERGY SCIENCES				
20060	OPERATING EXPENSES................................	226,343	277,500	250,700	261,294
20061	PLANT AND CAPITAL EQUIPMENT......................	16,990	32,000	21,100	21,556
20062	TOTAL, BASIC ENERGY SCIENCES........................	243,333	309,500	271,800	282,850
20065	ENERGY RESEARCH OVERSIGHT,ANALY. & UNIV. SUPPORT				
20069	ENERGY RESEARCH ANALYSIS				
20070	OPERATING EXPENSES................................	3,000	3,000	3,000	2,600
20071	PLANT AND CAPITAL EQUIPMENT......................	-----	-----	-----	-----
20072	TOTAL, ENERGY RESEARCH ANALYSIS.....................	3,000	3,000	3,000	2,600
20079	UNIVERSITY RESEARCH SUPPORT				
20080	OPERATING EXPENSES................................	10,600	12,470	9,500	5,100
20081	PLANT AND CAPITAL EQUIPMENT......................	-----	-----	-----	-----
20082	TOTAL, UNIVERSITY RESEARCH SUPPORT..................	10,600	12,470	9,500	5,100

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20085	PROGRAM DIRECTION AND OVERSIGHT	3,311	3,100	3,200	3,200
20088	SUBTOTAL, ENERGY RESEARCH OS.,ANAL., & UNIV. SUP.	16,911	18,570	15,700	10,900
20089	MULTI-PROGRAM FACILITIES				
20090	OPERATING EXPENSES	-----	-----	-----	-----
20091	PLANT AND CAPITAL EQUIPMENT	32,600	70,000	34,000	34,000
20092	TOTAL, MULTI-PROGRAM FACILITIES	32,600	70,000	34,000	34,000
159001	IN-HOUSE ENERGY MANAGEMENT				
159002	OPERATING EXPENSES	3,900	90,324	5,400	1,000
159003	PLANT AND CAPITAL EQUIPMENT	19,700	-----	56,024	9,000
159004	TOTAL, IN-HOUSE ENERGY MANAGEMENT	23,600	90,324	61,424	10,000
159006	TECHNICAL INFORMATION CENTER				
159007	OPERATING EXPENSES	14,526	17,091	13,641	8,553
159008	PLANT AND CAPITAL EQUIPMENT	1,300	-----	1,450	350
159009	TOTAL, TECHNICAL INFORMATION CENTER	15,826	17,091	15,091	8,903
159014	PLANT ENGINEERING AND DESIGN-NONDEFENSE				
159015	OPERATING EXPENSES	-----	2,000	-----	-----
159016	PLANT AND CAPITAL EQUIPMENT	700	-----	1,800	-----
159017	TOTAL, PLANT ENGINEERING AND DESIGN-NONDEFENSE	700	2,000	1,800	-----

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20105	POLICY AND MANAGEMENT - ER (ESRD)......................	1,040	1,100	1,200	390
30060	POLICY AND MANAGEMENT - EP (ESRD)......................	1,897	3,020	2,048	417
40165	POLICY AND MANAGEMENT - NE (ESRD)......................	1,610	1,850	1,850	1,584
70570	POLICY AND MANAGEMENT - CE (ESRD)......................	-----	2,838	2,764	950
999451	ASSISTANT SECRETARIES STAFF				
151008	CONSERVATION - ESRD (TO DOC-ERTA).................	813	-----	-----	-----
992089	TOTAL, ENERGY SUPPLY R & D	2,473,794	3,127,050	2,313,248	1,875,146
70585	TRANSFER FROM SWPA - CS (ESRD).........................	-9,000	-----	-----	-----
992088	GENERAL REDUCTIONS.....................................	-----	-----	-----	-----
30075	COST OUTLAY ADJUSTMENT - EPS&EP (ESRD)............	-----	-----	-----	-----
70610	COST OUTLAY ADJUSTMENT - CS (ESRD)................	-----	-----	-----	-----
40200	COST OUTLAY ADJUSTMENT - NE (ESRD)................	-----	-----	-----	-----
20150	COST OUTLAY ADJUSTMENT - ER (ESRD)................	-----	-----	-----	-----
159025	COST OUTLAY ADJUSTMENT - MA (ESRD)................	-----	-----	-----	-----
992087	UNOBLIGATED BALANCE....................................	-----	-----	-----	-----
20153	FY1981 DEFERRAL - ER(ESRD-OE).........................	-----	-----	-----	-----
20155	FY1981 DEFERRAL - ER(ESRD-P&CE).......................	-----	-----	-----	-----
40232	FY1981 DEFERRAL - NE(ESRD-OE).........................	-105,688	-----	-----	-----
40233	FY1981 DEFERRAL FROM FOSSIL - NE(ESRD -OE)...........	-----	-----	-----	-----
40234	FY1981 DEFERRAL - NE(ESRD-P&CE).......................	-36,647	-----	-----	-----
70631	FY1981 DEFERRAL - CS(ESRD)............................	-----	-----	-----	-----
70634	FY1981 DEFERRAL - CS(ESRD - P&CE).....................	-----	-----	-----	-----
992090	TOTAL, ENERGY SUPPLY R & D.............................	2,322,459	3,127,050	2,313,248	1,875,146
992091	(OPERATING EXPENSES).............................	1,973,531	2,845,927	1,981,414	1,651,690
992092	(PLANT AND CAPITAL EQUIPMENT)...................	348,928	281,123	331,834	223,456

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992500	FOSSIL ENERGY				
50005	COAL				
50009	MINING R&D				
50010	OP. EXP. & CAP. EQUIP.	10,992	14,145	7,000	1,000
50011	CONSTRUCTION	-----	-----	-----	-----
50012	TOTAL, MINING R&D	10,992	14,145	7,000	1,000
50014	COAL LIQUEFACTION				
50015	OP. EXP. & CAP. EQUIP.	98,784	54,850	51,600	26,200
50016	CONSTRUCTION	129,600	-----	-----	-----
50017	TOTAL, COAL LIQUEFACTION	228,384	54,850	51,600	26,200
50019	SURFACE COAL GASIFICATION				
50020	OP. EXP. & CAP. EQUIP.	53,088	46,070	40,761	10,500
50021	CONSTRUCTION	-----	-----	-----	-----
50022	TOTAL, SURFACE COAL GASIFICATION	53,088	46,070	40,761	10,500
50024	UNDERGROUND COAL GASIFICATION				
50025	OP. EXP. & CAP. EQUIP.	8,256	12,800	700	700
50026	CONSTRUCTION	-----	-----	-----	-----
50027	TOTAL, UNDERGROUND COAL GASIFICATION	8,256	12,800	700	700
50029	ADV. RESEARCH & TECHNOLOGY DEV				
50030	OP. EXP. & CAP. EQUIP.	52,416	65,405	51,657	17,000
50031	CONSTRUCTION	3,840	-----	6,350	2,800
50032	TOTAL, ADV. RESEARCH & TECHNOLOGY DEV.	56,256	65,405	58,007	19,800
50069	CONTROL TECHNOLOGY & COAL PREPARATION				
50070	CP. EXP. & CAP. EQUIP.	25,152	27,585	29,000	8,600
50071	CONSTRUCTION	-----	-----	-----	-----
50072	TOTAL, CONTROL TECHNOLOGY & COAL PREPARATION	25,152	27,585	29,000	8,600

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50074	HEAT ENGINES AND HEAT RECOVERY				
50075	OP. EXP. & CAP. EQUIP.	15,408	17,000	6,350	-----
50076	CONSTRUCTION.	-----	-----	-----	-----
50077	TOTAL, HEAT ENGINES AND HEAT RECOVERY.	15,408	17,000	6,350	-----
50084	COMBUSTION SYSTEMS				
50085	OP. EXP. & CAP. EQUIP.	41,044	46,990	23,895	6,500
50086	CONSTRUCTION.	-----	-----	-----	-----
50087	TOTAL, COMBUSTION SYSTEMS.	41,044	46,990	23,895	6,500
50094	FUEL CELLS				
50095	OP. EXP. & CAP. EQUIP.	34,464	29,545	22,500	9,500
50096	CONSTRUCTION.	-----	-----	-----	-----
50097	TOTAL, FUEL CELLS.	34,464	29,545	22,500	9,500
50109	MAGNETOHYDRODYNAMICS				
50110	OP. EXP. & CAP. EQUIP.	27,840	-----	-----	-----
50111	CONSTRUCTION.	-----	-----	-----	-----
50112	TOTAL, MAGNETOHYDRODYNAMICS.	27,840	-----	-----	-----
50120	PROGRAM DIRECTION - COAL.	12,019	12,520	12,350	8,000
50125	CAPITAL EQUIPMENT - COAL.	-----	-----	-----	-----
50130	SUBTOTAL, COAL.	512,903	326,910	252,163	90,800

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50135	PETROLEUM R&D				
50149	ENHANCED OIL RECOVERY				
50150	OP. EXP. & CAP. EQUIP.	15,456	21,700	18,700	5,800
50151	CONSTRUCTION	-----	-----	-----	-----
50152	TOTAL. ENHANCED OIL RECOVERY	15,456	21,700	18,700	5,800
50154	OIL SHALE				
50155	OP. EXP. & CAP. EQUIP.	18,192	19,730	16,757	6,300
50156	CONSTRUCTION	-----	-----	-----	-----
50157	TOTAL. OIL SHALE	18,192	19,730	16,757	6,300
50144	DRILLING AND OFFSHORE TECHNOLOGY				
50145	OP. EXP. & CAP. EQUIP.	-----	-----	-----	-----
50146	CONSTRUCTION	-----	-----	-----	-----
50147	TOTAL. DRILLING AND OFFSHORE TECHNOLOGY	-----	-----	-----	-----
50139	ADVANCED PROCESS TECHNOLOGY				
50140	OP. EXP. & CAP. EQUIP.	3,552	4,756	4,500	3,000
50141	CONSTRUCTION	-----	-----	-----	-----
50142	TOTAL. ADVANCED PROCESS TECHNOLOGY	3,552	4,756	4,500	3,000
50160	PROGRAM DIRECTION - PETROLEUM	1,555	1,620	1,600	1,000
50165	CAPITAL EQUIPMENT - PETROLEUM	2,160	-----	-----	-----
50170	SUBTOTAL PETROLEUM	40,915	47,806	41,557	16,100

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50175	GAS				
50179	UNCONVENTIONAL GAS RECOVERY				
50180	OP. EXP. & CAP. EQUIP.	11,520	14,100	11,000	-----
50181	CONSTRUCTION	-----	-----	-----	-----
50182	TOTAL, UNCONVENTIONAL GAS RECOVERY	11,520	14,100	11,000	-----
50185	PROGRAM DIRECTION - GAS	442	460	450	-----
50190	CAPITAL EQUIPMENT - GAS	192	-----	-----	-----
50200	SUBTOTAL - GAS	12,154	14,560	11,450	-----
50205	PROGRAM DIRECTION	-----	-----	-----	-----
50209	FEASIBILITY STUDIES				
50210	OPERATING EXPENSES	-----	-----	-----	-----
50211	PLANT AND CAPITAL EQUIPMENT	-----	-----	-----	-----
50212	TOTAL, FEASIBILITY STUDIES	-----	-----	-----	-----
50219	LEASING PROGRAM				
50220	OP. EXP. & CAP. EQUIP.	-----	-----	-----	-----
50265	TOTAL, FOSSIL ENERGY	565,972	389,276	305,170	106,900
50255	RESCISSION - FE (FE)	-----	-----	-----	-----
50260	COST OUTLAY ADJUSTMENT - FE (FE)	-----	-----	-----	-----
50261	FY1981 DEFERRAL - FE (FE)	-19,500	-----	-----	-----
50262	FY1981 DEFERRAL - (FE) FE (CONST)	-129,600	-----	-----	-----
992590	TOTAL, FOSSIL ENERGY	416,872	389,276	305,170	106,900
992591	(OP. EXP. & CAP. EQUIP.)	413,032	389,276	298,820	104,100
992592	(CONSTRUCTION)	3,840	-----	6,350	2,800

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993000	URANIUM ENRICHMENT				
40104	URANIUM ENRICHMENT ACTIVITIES				
40105	OPERATING EXPENSES	1,021,861	2,025,600	1,189,500	1,205,800
40106	PLANT AND CAPITAL EQUIPMENT	687,266	-----	740,350	724,050
40107	TOTAL, URANIUM ENRICHMENT ACTIVITIES	1,709,127	2,025,600	1,929,850	1,929,850
40109	URANIUM RESOURCE ASSESSMENT				
40110	OPERATING EXPENSES	9,679	10,800	10,600	3,000
40111	PLANT AND CAPITAL EQUIPMENT	300	-----	200	-----
40112	TOTAL, URANIUM RESOURCE ASSESSMENT	9,979	10,800	10,800	3,000
40114	ADVANCED ISOTOPE SEPARATION TECHNOLOGY				
40115	OPERATING EXPENSES	79,561	96,100	45,600	30,296
40116	PLANT AND CAPITAL EQUIPMENT	6,150	-----	6,500	3,900
40117	TOTAL, ADVANCED ISOTOPE SEPARATION TECHNOLOGY	85,711	96,100	52,100	34,196
40135	SUBTOTAL, URANIUM ENRICHMENT	1,804,817	2,132,500	1,992,750	1,967,046
40138	REVENUES				
40139	OPERATING EXPENSES	-1,136,434	-----	-----	-1,304,750
40140	PLANT AND CAPITAL EQUIPMENT	-693,766	-1,908,700	-1,923,700	-727,950
40141	TOTAL, REVENUES	-1,830,200	-1,908,700	-1,923,700	-2,032,700
40143	LESS REVENUES NOT AVAILABLE	-----	-----	-----	65,654
40230	GENERAL REDUCTION - NE (URE)	-----	-----	-----	-----
40210	COST OUTLAY ADJUSTMENT - NE (URE)	-----	-----	-----	-----
993090	TOTAL, URANIUM ENRICHMENT	-25,383	223,800	69,050	-----
993091	(OPERATING EXPENSES)	-25,333	2,132,500	1,245,700	-----
993092	(PLANT AND CAPITAL EQUIPMENT)	-50	-1,908,700	-1,176,650	-----

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993500	NAVAL PETROLEUM AND OIL SHALE RESERVES				
30025	NAVAL PETROLEUM AND OIL SHALE RESERVES...............	213,142	261,031	183,689	232,500
50215	DOMESTIC ENERGY SUPPLY................................	-----	-----	-----	-----
50235	INDUSTRIALIZATION, PLANNING & DEV....................	-----	-----	-----	-----
40178	EXECUTIVE DIRECTION (NE-NPOSR).......................	-----	-----	-----	-----
50240	EXECUTIVE DIRECTION..................................	-----	-----	-----	-----
50221	LEASING PROGRAM.........................(81 STRUCTURE)	-----	-----	-----	-----
30030	NAVAL OIL SHALE RESERVE..............................	-----	-----	-----	-----
50225	COAL RESOURCE MANAGEMENT PROGRAM.....................	-----	-----	-----	-----
50230	SHALE OIL INDUSTRIALIZATION..........................	-----	-----	-----	-----
70311	SOLAR (NP&OSR)......................(81&82 STRUCTURE)	-----	-----	-----	-----
70600	COST OUTLAY ADJUSTMENT - CS (NPR)..................	-----	-----	-----	-----
30080	COST OUTLAY ADJUSTMENT - EPS&EP (NPR)..............	-----	-----	-----	-----
50264	FY1981 DEFERRAL - FE (NP&OSR)......................	-----	-----	-----	-----
993590	TOTAL, NAVAL PETROLEUM AND OIL SHALE RESERVES.........	213,142	261,031	183,689	232,500

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
994000	CONSERVATION				
70340	BUILDINGS AND COMMUNITY SYSTEMS......................	47,665	17,721	6,835	-----
70350	INDUSTRIAL..	28,848	-----	-----	-----
70360	TRANSPORTATION..	58,944	25,650	15,400	-----
70370	STATE AND LOCAL.......................................	226,247	3,065	2,500	4,260
70375	MULTI-SECTOR (TO DOC-ERTA)............................	8,409	23,573	10,375	17,542
70379	MULTI-SECTOR (TO DOC-HQ)..............................	8,064	-----	-----	-----
70410	ENERGY IMPACT ASSISTANCE..............................	-14,337	-----	-----	-----
30045	EMERGENCY ENERGY CONSERVATION.........................	-----	-----	-----	-----
70420	FEASIBILITY STUDIES...................................	-----	-----	-----	-----
70381	SUBTOTAL ENERGY CONSERVATION..........................	363,840	70,009	35,110	21,802
70620	COST OUTLAY ADJUSTMENT - CS (EC)......................	-----	-----	-----	-----
70632	FY1981 DEFERRAL - CS(EC) (TO DOC-ERTA)................	-62,663	-----	-----	-----
70635	FY1981 DEFERRAL - CS(EC) (TO DOC-HQ)..................	-178,107	-----	-----	-----
70646	STATE AND LOCAL.......................................	5,663	-----	-----	-----
70647	IMPACT ASST...	14,337	-----	-----	-----
994090	TOTAL, ENERGY CONSERVATION............................	143,070	70,009	35,110	21,802

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
994100	NUCLEAR WASTE DISPOSAL FUND				
40179	NUCLEAR WASTE DISPOSAL FUND..........................	-----	-----	-----	185,000
994190	TOTAL, NUCLEAR WASTE DISPOSAL FUND....................	-----	-----	-----	185,000

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
994290	ALTERNATIVE FUELS PRODUCTION				
50245	ALTERNATIVE FUELS PRODUCTION - FE (AFP)..............	-----	-----	-----	-----
70390	ALTERNATIVE FUELS PRODUCTION - CRE (AFP).............	-----	-----	-----	-----
994291	TOTAL, ALTERNATIVE FUELS PRODUCTION...................	-----	-----	-----	-----

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
994400	STRATEGIC PETROLEUM RESERVE				
30020	STRATEGIC PETROLEUM RESERVE...........................	3,875,432	4,939,044	1,400,000	2,316,178
30021	LESS OFF-BUDGET SPR..................................	-3,684,000	-4,327,983	-795,766	-2,074,060
30022	SUBTOTAL, ON-BUDGET SPR............................	191,432	611,061	604,234	242,118
30085	COST OUTLAY ADJUSTMENT - EPS&EP (SPR).............	-----	-----	-----	-----
994490	TOTAL, ON-BUDGET STRATEGIC PETROLEUM RESERVE..........	191,432	611,061	604,234	242,118

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
994800	ENERGY INFORMATION ACTIVITIES				
110005	PROGRAM DIRECTION....................................	-----	-----	-----	-----
110010	ENERGY APPLIED ANALYSIS..............................	-----	-----	-----	-----
110020	COLLECTION PRODUCTION AND ANALYSIS...................	50,382	50,425	41,627	34,639
110030	INFORMATION VALIDATION...............................	-----	-----	-----	-----
110040	PROGRAM SERVICES.....................................	20,554	21,259	17,694	13,162
110035	COLLECTION PRODUCTION AND DISSEMINATION..............	-----	-----	-----	-----
110045	POLICY AND MANAGEMENT................................	7,983	8,316	7,231	6,699
110046	DATA INFORMATION SERVICES............................	-----	-----	-----	-----
110047	COST OUTLAY ADJUSTMENT - EIA (EIA)...................	-----	-----	-----	-----
994890	TOTAL, ENERGY INFORMATION ACTIVITIES.................	78,919	80,000	66,552	54,500

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
995200	EMER. PREP. & ENERGY REGULATION				
100020	COAL UTILIZATION....................................	4,800	-----	-----	-----
100040	UTILITY PROGRAMS....................................	-----	-----	-----	-----
100060	COMPLIANCE..	36,671	13,500	13,500	13,500
100080	PETROLEUM OPERATIONS (TO FERC)......................	600	600	600	600
100082	PETROLEUM OPERATIONS (TO DOC).......................	1,992	2,200	1,668	1,668
30057	PETROLEUM OPERATIONS - EP (EP&ER)...................	-----	-----	-----	-----
30055	EMERGENCY PREPAREDNESS..............................	10,245	10,314	7,407	5,440
30056	UTILITY PROGRAMS - EP (EP&ER).......................	-----	-----	-----	-----
30058	OIL SUPPLY SECURITY - EP (EP&ER)....................	-----	-----	-----	-----
100120	PROGRAM ADMINISTRATION..............................	3,069	800	648	648
30050	GASOLINE RATIONING..................................	-----	-----	-----	-----
100160	OFFICE OF HEARINGS AND APPEALS (TO DOJ).............	3,940	4,400	4,400	4,400
100161	OFFICE OF HEARINGS AND APPEALS (TO DOC).............	960	1,100	1,100	1,100
100170	REAPPROPRIATION (TO D[illegible]J)..............................	-31,571	-----	-----	-----
100171	REAPPROPRIATION (TO DOC)............................	-6,629	-----	-----	-----
30087	COST OUTLAY ADJUSTMENT - EPS&EP (EP&ER)............	-----	-----	-----	-----
30089	LESS PROPOSED SUPPLEMENTAL (EP&ER)..................	-----	-----	-----	-----
30088	LESS PROPOSED SUPPLEMENTAL..........................	-----	-----	-----	-----
995290	SUBTOTAL, EMER. PREP. & ENERGY REGULATION...........	24,077	32,914	29,323	27,356

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
993600	FERC SALARIES AND EXPENSES				
90010	OIL REGULATION......................................	8,195	6,842	6,842	6,987
90020	GAS REGULATION......................................	36,298	41,809	41,809	42,731
90030	HYDRO REGULATION....................................	16,062	25,209	25,209	23,218
90040	MULTI-RESOURCE REGULATION...........................	15,622	19,239	19,239	19,564
90045	GENERAL REDUCTION...................................	-----	-----	-----	-----
90047	REVENUES..	-----	-----	-----	-60,000
995690	TOTAL, FERC SALARIES AND EXPENSES....................	76,177	93,099	93,099	32,500

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
996000	GEOTHERMAL RESOURCES				
70560	GEOTHERMAL RESOURCES DEVELOPMENT FUND.................	2,301	200	150	75
70633	FY1981 DEFERRAL - CS(GRDF)...........................	-101	-----	-----	-----
996090	TOTAL, GEOTHERMAL RESOURCES...........................	2,200	200	150	75

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  A/S
  CODE               ACCOUNT TITLE                             FY 1982      FY 1983      FY 1983      FY 1983
  ....                                                             B/A          B/A          B/A          B/A
                                                               ENACTED     A/S REQ.     OMB REQ.   CONG. REQ.
---------------------------------------------------------------------------------------------------------------
997000 ALASKA POWER O&M

 70450  POWER MARKETING - ALASKA POWER ADMINISTRATION........    3,538        3,676        3,037        2,809
                                                            ------------ ------------ ------------ ------------
997090 TOTAL, ALASKA POWER ..................................    3,538        3,676        3,037        2,809
                                                            ============ ============ ============ ============


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  A/S
  CODE               ACCOUNT TITLE                             FY 1982      FY 1983      FY 1983      FY 1983
  ....                                                             B/A          B/A          B/A          B/A
                                                               ENACTED     A/S REQ.     OMB REQ.   CONG. REQ.
---------------------------------------------------------------------------------------------------------------
997200 BONNEVILLE

 70460  POWER MARKETING - BONNEVILLE POWER ADMINISTRATION....  279,720      550,000      490,000      455,000
                                                            ------------ ------------ ------------ ------------
997290 TOTAL, BONNEVILLE POWER ADMIN.........................  279,720      550,000      490,000      455,000
                                                            ============ ============ ============ ============


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  A/S
  CODE               ACCOUNT TITLE                             FY 1982      FY 1983      FY 1983      FY 1983
  ....                                                             B/A          B/A          B/A          B/A
                                                               ENACTED     A/S REQ.     OMB REQ.   CONG. REQ.
---------------------------------------------------------------------------------------------------------------
997400 SOUTHEASTERN O&M

 70470  POWER MARKETING - SOUTHEASTERN POWER ADMINISTRATION..    7,237       11,848       10,663       11,848
                                                            ------------ ------------ ------------ ------------
997490 TOTAL, SOUTHEASTERN O&M...............................    7,237       11,848       10,663       11,848
                                                            ============ ============ ============ ============
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  A/S                                                     FY 1982     FY 1983     FY 1983     FY 1983
  CODE              ACCOUNT TITLE                            B/A         B/A         B/A         B/A
  ....                                                    ENACTED    A/S REQ.    OMB REQ.   CONG. REQ.
------------------------------------------------------------------------------------------------------------
997500 SOUTHEASTERN CONT. FUND

 70485  SOUTHEASTERN POWER - CONT. FUND.....................         50       -----       -----       -----
                                                         ----------- ----------- ----------- -----------
997590 TOTAL, SOUTHEASTERN CONT. FUND.......................         50       -----       -----       -----
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                                          FY 1983  O M B BUDGET REQUEST
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  A/S                                                     FY 1982     FY 1983     FY 1983     FY 1983
  CODE              ACCOUNT TITLE                            B/A         B/A         B/A         B/A
  ....                                                    ENACTED    A/S REQ.    OMB REQ.   CONG. REQ.
------------------------------------------------------------------------------------------------------------
997800 SOUTHWESTERN O&M

 70480  POWER MARKETING - SOUTHWESTERN POWER ADMINISTRATION..     21,269      38,100      34,290      34,290
                                                         ----------- ----------- ----------- -----------
997890 TOTAL, SOUTHWESTERN O&M..............................     21,269      38,100      34,290      34,290
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  A/S                                                     FY 1982     FY 1983     FY 1983     FY 1983
  CODE              ACCOUNT TITLE                            B/A         B/A         B/A         B/A
  ....                                                    ENACTED    A/S REQ.    OMB REQ.   CONG. REQ.
------------------------------------------------------------------------------------------------------------
998000 SOUTHWESTERN CONT. FUND

 70500  SOUTHWESTERN POWER - CONT. FUND.....................      -----       -----       -----       -----
                                                         ----------- ----------- ----------- -----------
998090 TOTAL, SOUTHWESTERN CONT. FUND.......................      -----       -----       -----       -----
                                                         =========== =========== =========== ===========
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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
998200	WESTERN AREA O&M				
70490	POWER MARKETING - WAPA O&M..........................	210,774	226,400	212,200	207,200
998290	TOTAL, WESTERN AREA O&M..............................	210,774	226,400	212,200	207,200

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
998400	WESTERN AREA POWER - EMERGENCY FUND				
70510	WAPA EMERGENCY FUND..................................	500	500	500	500
998490	TOTAL, WAPA EMERGENCY FUND............................	500	500	500	500

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
998600	COLORADO RIVER BASIN				
70440	COLARADO RIVER BASIN..................................	-----	-----	-----	-----
998690	TOTAL, COLORADO RIVER BASIN...........................	-----	-----	-----	-----

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
999000	DEPARTMENTAL ADMINISTRATION				
120010	POLICY ANALYSIS AND SYSTEM STUDIES....................	14.716	16.899	13.689	1.640
140100	INTERNATIONAL AFFAIRS..................................	4.072	5.187	3.942	400
152000	MANAGEMENT AND ADMINISTRATION (TO DOC-ERTA)..........	139.824	171.996	139.554	87.526
152005	MANAGEMENT AND ADMINISTRATION (TO DOC-HQ)............	2.345	-----	-----	2.345
152007	MANAGEMENT AND ADMINISTRATION (TO DOI)...............	1.157	-----	-----	1.157
152008	MANAGEMENT AND ADMINISTRATION (TO DOJ)...............	875	-----	-----	875
152009	TOTAL MANAGEMENT AND ADMINISTRATION..................	144.201	171.996	139.554	91.903
150999	ASSISTANT SECRETARIES STAFF				
151000	DEFENSE PROGRAMS..................................	-----	-----	-----	-----
151001	ENERGY RESEARCH...................................	-----	-----	-----	-----
151002	ENVIR...	-----	-----	-----	-----
151003	NUCLEAR ENERGY....................................	-----	-----	-----	-----
151005	CONSERVATION (TO DOI).............................	956	-----	-----	355
151007	CONSERVATION (TO DOC-ERTA)........................	-----	-----	-----	-----
151025	TOTAL, ASSISTANT SECRETARIES STAFF....................	956	-----	-----	355
159010	MINORITY ECONOMIC IMPACT..............................	-----	-----	-----	-----
159018	COST OF WORK FOR OTHERS...............................	47.614	69.983	69.983	71.983
159019	MISCELLANEOUS REVENUES................................	-142.700	-80.855	-80.855	-82.855
190022	LEGISLATIVE AFFAIRS (TO DOC-ERTA).....................	1.054	-----	1.836	288
190023	LEGISLATIVE AFFAIRS (TO DOC-HQ).......................	183	-----	-----	183
190024	LEGISLATIVE AFFAIRS (TO DOI)..........................	73	-----	-----	73
190025	LEGISLATIVE AFFAIRS (TO DOJ)..........................	73	-----	-----	73
190026	TOTAL, LEGISLATIVE AFFAIRS............................	1.383	-----	1.836	617
190030	CONSUMER AFFAIRS......................................	100	455	505	-----
190035	A/S FOR CONG., INTERGOV. & PUBLIC AFF............	5.416	-----	487	1.476
190021	COMPETITION...	100	-----	517	-----
190010	INTERGOVERNMENTAL AFFAIRS.............................	-----	4.555	1.205	-----
190020	PUBLIC AFFAIRS..	200	4.610	3.620	150

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
159012	OFFICE OF THE SECRETARY..............................	2,093	2,505	2,131	649
159011	BOARD OF CONTRACT APPEALS............................	312	314	314	192
170010	INSPECTOR GENERAL....................................	8,085	24,726	7,089	7,179
160006	GENERAL COUNSEL (TO DOC-ERTA)........................	12,536	16,550	12,107	3,795
160008	GENERAL COUNSEL (TO DOC-HQ)..........................	880	-----	-----	880
160010	GENERAL COUNSEL (TO DOI).............................	240	-----	-----	240
160011	GENERAL COUNSEL (TO DOJ).............................	1,400	-----	-----	1,400
999010	TOTAL, GENERAL COUNSEL...............................	15,056	16,550	12,107	6,315
159013	OPERATIONS OFFICES...................................	89,290	119,482	87,982	62,389
159020	CHANGES IN INVENTORIES WORKING CAPITAL...............	-----	63,000	-----	-----
150001	IN-HOUSE ENERGY MANAGEMENT				
150002	OPERATING EXPENSES......................(82 ONLY)	-----	-----	-----	-----
150003	PLANT AND CAPITAL EQUIPMENT.............(82 ONLY)	-----	-----	-----	-----
150004	TOTAL, IN-HOUSE ENERGY MANAGEMENT....................	-----	-----	-----	-----
150006	TECHNICAL INFORMATION CENTER				
150007	OPERATING EXPENSES......................(82 ONLY)	-----	-----	-----	-----
150008	PLANT AND CAPITAL EQUIPMENT.............(82 ONLY)	-----	-----	-----	-----
150009	TOTAL, TECHNICAL INFORMATION CENTER..................	-----	-----	-----	-----
150014	PLANT ENGINEERING AND DESIGN-NONDEFENSE				
150015	OPERATING EXPENSES......................(82 ONLY)	-----	-----	-----	-----
150016	PLANT AND CAPITAL EQUIPMENT.............(82 ONLY)	-----	-----	-----	-----
150017	TOTAL, PLANT ENGINEERING AND DESIGN-NONDEFENSE.......	-----	-----	-----	-----
10083	SECURITY INVESTIGATIONS................(81 STRUCTURE)	-----	-----	-----	-----
999089	TOTAL, DEPARTMENTAL ADMINISTRATION...................	191,694	419,407	264,106	162,413
159026	COST OUTLAY ADJUSTMENT - MA (DA).....................	-----	-----	-----	-----
159030	LESS UNOBLIGATED BALANCE.............................	-----	-----	-----	-----
159032	GENERAL REDUCTION....................................	-----	-----	-----	-----
999090	TOTAL, DEPARTMENTAL ADMINISTRATION...................	191,694	419,407	264,106	162,413

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
999100	SUMMARY BY APPROPRIATION:				
999105	ATOMIC ENERGY	4,691,268	7,236,318	5,651,500	5,505,781
999110	GENERAL SCIENCE	542,702	666,600	518,500	600,970
999115	ENERGY SUPPLY R&D	2,322,459	3,127,050	2,313,248	1,875,146
999120	FOSSIL ENERGY	416,872	389,276	305,170	106,900
999125	URANIUM ENRICHMENT	-25,383	223,800	69,050	-----
999130	NAVAL PETROLEUM AND OIL SHALE RESERVES	213,142	261,031	183,689	232,500
999135	ENERGY CONSERVATION	143,070	70,009	35,110	21,802
999136	NUCLEAR WASTE DISPOSAL FUND	-----	-----	-----	185,000
999137	ALTERNATIVE FUELS PRODUCTION	-----	-----	-----	-----
999140	STRATEGIC PETROLEUM RESERVE	3,875,432	4,939,044	1,400,000	2,316,176
999145	ENERGY INFORMATION ACTIVITIES	78,919	80,000	66,552	54,500
999150	EMER. PREP. & ENERGY REGULATION	24,077	32,914	29,323	27,356
999155	FERC SALARIES AND EXPENSES	76,177	93,099	93,099	32,500
999160	GEOTHERMAL RESOURCES	2,200	200	150	75
999164	POWER MARKETING ADMINISTRATIONS:				
999165	ALASKA POWER ADMINISTRATION	3,538	3,676	3,037	2,809
999170	BONNEVILLE POWER ADMINISTRATION	279,720	550,000	490,000	455,000
999175	SOUTHEASTERN POWER O&M	7,237	11,848	10,663	11,848
999180	SOUTHEASTERN CONT. FUND	50	-----	-----	-----
999185	SOUTHWESTERN POWER O&M	21,269	38,100	34,290	34,290
999190	SOUTHWESTERN POWER CONT. FUND	-----	-----	-----	-----
999195	WESTERN AREA POWER O&M	210,774	226,400	212,200	207,200
999200	WAPA EMERGENCY FUND	500	500	500	500
999205	COLORADO RIVER BASIN	-----	-----	-----	-----
999206	TOTAL, POWER MARKETING ADMINISTRATIONS	523,088	830,524	750,690	711,647
999215	DEPARTMENTAL ADMINISTRATION	191,694	419,407	264,106	162,413
502100	PAYMENTS TO STATES	85	-----	85	85
502200	SPECIAL FOREIGN CURRENCY	-----	-----	-----	-----
969850	SUBTOTAL DOE	13,075,802	18,369,272	11,680,272	11,832,853
939851	LESS OFF-BUDGET SPRO	-3,684,000	-4,327,983	-795,766	-2,074,060
989852	TOTAL DOE	9,391,802	14,041,289	10,884,506	9,758,793

FOSSIL ENERGY R&D

Question 4: In reviewing the Department of Energy's proposed FY 1983 budget, it appears you are initiating a phasing out of Fossil Energy R&D. Congress appropriated $566 million in FY 1982 for Fossil Energy R&D compared to your FY 1983 request of $106.9 million. Fossil Energy currently provides 90 percent of this nation's energy and will provide over 70 percent in the year 2000. Therefore, there are legitimate national policy issues involved in an apparent abandonment of long-term Fossil Energy R&D. Press reports indicate that initially DOE requested $305 million in FY 1983 from OMB as a minimum budget, but was allowed only $107 million. DOE appealed the entire $305 million back to OMB during negotiations on the final FY 1983 budget.

a. Therefore,, since DOE had determined that a minimum viable long-term Fossil Energy R&D program was $305 million; will you tell me the impact of cutting the budget to $106.9 million?

Answer: After the submission of the $305 million FY 1983 revised OMB budget, we worked closely with OMB to develop a revised Fossil Energy program which was responsive to the President's goal of reducing the Federal budget. The priorities and programs which emerged in this revised program continue to ensure that a core technology base program of research and development is maintained so that the private sector remains capable of introducing new fossil energy concepts into commercial practice well into the next century. Furthermore, I am satisfied that the Fossil Energy program proposed for FY 1983 adequately provides for necessary long-term, high-risk Federal R&D, while transferring to industry the task of further development of near-term technologies.

b. Would you provide for the Record, Mr. Secretary, a line item listing comparing the $305 million budget to the $107 million budget?

Answer: See attached.

c. What are the Administration's plans for long-term, high-risk Fossil Energy R&D? Will you cut the budget further in FY 1984?

Answer: The Department is committed to a continuing program for long-term, high-risk Fossil Enegy R&D as evidenced by the FY 1983 budget request of $106.9 million. As previously stated, considerable review and discussion with OMB concerning the Fossil Energy R&D program culminated in the decision to maintain a core technology base program. It would be presumptuous to project FY 1984 budget levels at this moment as the Fossil Energy program must be considered along with competing requirements in the context of re-examined priorities and affordability.

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
992500	FOSSIL ENERGY				
50005	COAL				
50009	MINING R&D				
50010	OP. EXP. & CAP. EQUIP.	10,992	14,145	7,000	1,000
50011	CONSTRUCTION	-----	-----	-----	-----
50012	TOTAL, MINING R&D	10,992	14,145	7,000	1,000
50014	COAL LIQUEFACTION				
50015	OP. EXP. & CAP. EQUIP.	98,784	54,850	51,600	26,200
50016	CONSTRUCTION	129,600	-----	-----	-----
50017	TOTAL, COAL LIQUEFACTION	228,384	54,850	51,600	26,200
50019	SURFACE COAL GASIFICATION				
50020	OP. EXP. & CAP. EQUIP.	53,088	46,070	40,761	10,500
50021	CONSTRUCTION	-----	-----	-----	-----
50022	TOTAL, SURFACE COAL GASIFICATION	53,088	46,070	40,761	10,500
50024	UNDERGROUND COAL GASIFICATION				
50025	OP. EXP. & CAP. EQUIP.	8,256	12,800	700	700
50026	CONSTRUCTION	-----	-----	-----	-----
50027	TOTAL, UNDERGROUND COAL GASIFICATION	8,256	12,800	700	700
50029	ADV. RESEARCH & TECHNOLOGY DEV				
50030	OP. EXP. & CAP. EQUIP.	52,416	65,405	51,657	17,000
50031	CONSTRUCTION	3,840	-----	6,350	2,800
50032	TOTAL, ADV. RESEARCH & TECHNOLOGY DEV	56,256	65,405	58,007	19,800
50069	CONTROL TECHNOLOGY & COAL PREPARATION				
50070	OP. EXP. & CAP. EQUIP.	25,152	27,585	29,000	8,600
50071	CONSTRUCTION	-----	-----	-----	-----
50072	TOTAL, CONTROL TECHNOLOGY & COAL PREPARATION	25,152	27,585	29,000	8,600

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
50074	HEAT ENGINES AND HEAT RECOVERY				
50075	OP. EXP. & CAP. EQUIP.	15,408	17,000	6,350	-----
50076	CONSTRUCTION	-----	-----	-----	-----
50077	TOTAL, HEAT ENGINES AND HEAT RECOVERY	15,408	17,000	6,350	-----
50084	COMBUSTION SYSTEMS				
50085	OP. EXP. & CAP. EQUIP.	41,044	46,990	23,895	6,500
50086	CONSTRUCTION	-----	-----	-----	-----
50087	TOTAL, COMBUSTION SYSTEMS	41,044	46,990	23,895	6,500
50094	FUEL CELLS				
50095	OP. EXP. & CAP. EQUIP.	34,464	29,545	22,500	9,500
50096	CONSTRUCTION	-----	-----	-----	-----
50097	TOTAL, FUEL CELLS	34,464	29,545	22,500	9,500
50109	MAGNETOHYDRODYNAMICS				
50110	OP. EXP. & CAP. EQUIP.	27,840	-----	-----	-----
50111	CONSTRUCTION	-----	-----	-----	-----
50112	TOTAL, MAGNETOHYDRODYNAMICS	27,840	-----	-----	-----
50120	PROGRAM DIRECTION - COAL	12,019	12,520	12,350	8,000
50125	CAPITAL EQUIPMENT - COAL	-----	-----	-----	-----
50130	SUBTOTAL, COAL	512,903	326,910	252,163	90,800

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
50135	PETROLEUM R&D				
50149	ENHANCED OIL RECOVERY				
50150	OP. EXP. & CAP. EQUIP.	15,456	21,700	18,700	5,800
50151	CONSTRUCTION	-----	-----	-----	-----
50152	TOTAL. ENHANCED OIL RECOVERY	15,456	21,700	18,700	5,800
50154	OIL SHALE				
50155	OP. EXP. & CAP. EQUIP.	18,192	19,730	16,757	6,300
50156	CONSTRUCTION	-----	-----	-----	-----
50157	TOTAL. OIL SHALE	18,192	19,730	16,757	6,300
50144	DRILLING AND OFFSHORE TECHNOLOGY				
50145	OP. EXP. & CAP. EQUIP.	-----	-----	-----	-----
50146	CONSTRUCTION	-----	-----	-----	-----
50147	TOTAL. DRILLING AND OFFSHORE TECHNOLOGY	-----	-----	-----	-----
50139	ADVANCED PROCESS TECHNOLOGY				
50140	OP. EXP. & CAP. EQUIP.	3,552	4,756	4,500	3,000
50141	CONSTRUCTION	-----	-----	-----	-----
50142	TOTAL. ADVANCED PROCESS TECHNOLOGY	3,552	4,756	4,500	3,000
50160	PROGRAM DIRECTION - PETROLEUM	1,555	1,620	1,600	1,000
50165	CAPITAL EQUIPMENT - PETROLEUM	2,160	-----	-----	-----
50170	SUBTOTAL PETROLEUM	40,915	47,806	41,557	16,100

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A/S CODE	ACCOUNT TITLE	FY 1982 B/A ENACTED	FY 1983 B/A A/S REQ.	FY 1983 B/A OMB REQ.	FY 1983 B/A CONG. REQ.
50175	GAS				
50179	UNCONVENTIONAL GAS RECOVERY				
50180	OP. EXP. & CAP. EQUIP.	11,520	14,100	11,000	-----
50181	CONSTRUCTION	-----	-----	-----	-----
50182	TOTAL, UNCONVENTIONAL GAS RECOVERY	11,520	14,100	11,000	-----
50185	PROGRAM DIRECTION - GAS	442	460	450	-----
50190	CAPITAL EQUIPMENT - GAS	192	-----	-----	-----
50200	SUBTOTAL - GAS	12,154	14,560	11,450	-----
50205	PROGRAM DIRECTION	-----	-----	-----	-----
50209	FEASIBILITY STUDIES				
50210	OPERATING EXPENSES	-----	-----	-----	-----
50211	PLANT AND CAPITAL EQUIPMENT	-----	-----	-----	-----
50212	TOTAL, FEASIBILITY STUDIES	-----	-----	-----	-----
50219	LEASING PROGRAM				
50220	OP. EXP. & CAP. EQUIP.	-----	-----	-----	-----
50265	TOTAL, FOSSIL ENERGY	565,972	389,276	305,170	106,900
50255	RESCISSION - FE (FE)	-----	-----	-----	-----
50260	COST OUTLAY ADJUSTMENT - FE (FE)	-----	-----	-----	-----
50261	FY1981 DEFERRAL - FE (FE)	-19,500	-----	-----	-----
50262	FY1981 DEFERRAL - (FE) FE (CONST)	-129,600	-----	-----	-----
992590	TOTAL, FOSSIL ENERGY	416,872	389,276	305,170	106,900
992591	(OP. EXP. & CAP. EQUIP.)	413,032	389,276	298,820	104,100
992592	(CONSTRUCTION)	3,840	-----	6,350	2,800

Question 5. The Administration accords a high priority to fill of the SPR. Is that right?

Answer. Yes, the Administration accords a high priority to fill of the SPR. This policy is evidenced by the $7 billion in appropriations for SPR oil acquisition which the President has proposed over the past year, as well as by the accelerated rates at which available oil storage capacity has been filled, in contrast to earlier fill rates.

CY 1981 Oil Appropriations
($ Millions)

FY 1981 Supplemental	1,305
FY 1982	2,074
FY 1983	3,684
	$7,063

Question 6: Now is a good time to be buying oil, since there is a surplus and the price is falling (from about $35.50 a year ago to $34.00 now). Is that right?

Answer: While prices and price trends for specific types of crude oil differ, it is true that crude oil market conditions are favorable as compared to conditions several years ago. We have taken advantage of these conditions by acquiring nearly all the oil for which we expect permanent storage capacity to be available in FY 1982.

Question 7: The Administration bought oil for the SPR at a rate of about 300,000 b/d for fiscal year 1981. At what rate will you buy oil under the budget for fiscal year 1982?

Answer: The President's FY 1983 budget estimates that during FY 1982, the SPR oil inventory will increase by approximately 67.6 million barrels (MMB) to a total level of 266.9 MMB by the end of FY 1982. This would represent an average daily fill rate of 185,000 b/d and fully fill the available SPR storage capacity. We have been filling the Reserve thus far in FY 1982 at considerably higher rates and are confident that we will meet or exceed the targets in the budget.

Question 8: At what rate will you buy oil under the budget proposed for fiscal year 1983?

Answer: The President's FY 1983 budget projects a cumulative SPR fill level of 343.1 million barrels (MMB) at the end of fiscal year 1983, an increase of 76.2 MMB from the level projected for the end of fiscal year 1982. This represents an average daily fill rate during FY 1983 of 209,000 b/d and fully fills available SPR storage capacity.

Question 9. Where will that leave us in terms of the total amount of oil in storage at the end of fiscal years 1982 and 1983?

Answer. The President's FY 1983 budget projects cumulative SPR oil storage levels of 266.9 million barrels at the end of fiscal year 1982 and 343.1 million barrels at the end of fiscal year 1983.

Question 10: How much oil in the SPR is "enough"? Shouldn't we buy as much oil as we can now while there is an oversupply and the price of oil is falling?

Answer: Our commitment to having 750 million barrels in the Strategic Petroleum Reserve by the end of this decade remains firm. Too, our policy of filling available SPR permanent oil storage capacity in FY 1983 as rapidly as possible remains firm, both because we seek to reduce our vulnerability to oil supply interruptions and because current oil market conditions permit rapid rates of fill. Whether this is "enough" or not has to be put in the context that we are making great efforts and having considerable success in increasing the SPR inventory. Our preparedness is better today than several years ago and should be much better in the future when such factors as U.S. oil imports, U.S. oil consumption, private-sector storage capacity, and SPR are considered.

Question 11.	Shouldn't we try to acquire capacity to store oil in every reasonable way possible? Have you looked into options such as leasing unused private storage space (either salt domes or onshore tanks) and idle super tankers? What did you find?
Answer.	Now that we have arranged for delivery of nearly all the oil we plan to have delivered to permanent SPR oil facilities in fiscal year 1982, we are again looking at the advantages and disadvantages of arranging for interim storage of additional crude oil in private sector storage facilities.

With respect to acquiring additional capacity, we must bear in mind a number of factors, including:

- costs
- whether the acquisition would displace private stocks
- suitability in terms of location, pipeline access, etc.
- timing.

Use of steel tanks and tankers has been studied a number of times since 1975. Generally, decisions were made not to use such approaches because of a number of factors including cost and implementation problems.

Questions 12 and 13

Q. In November, 1981, the Research and Development Panel of the Energy Research Advisory Board submitted to your Deputy Secretary at his request a report on Federal Energy R&D Priorities. Among the conclusions were:

"The overall level of Federal R&D funding for conservation and improved utilization programs is too low in view of their potential for energy improvements and the inability of many important energy-consuming sectors to conduct R&D."

Since then, you have proposed even greater cuts in energy conservation research. Do you disagree with the conclusions of the Energy Research Advisory Board?

Would you provide this Committee with a response to each of the conclusions of the Report of the Research and Development Panel?

A. We agree with the Energy Research Advisory Board (ERAB) that in the areas of conservation and improved utilization there exists a large potential for increasing the efficiency of the Nation's overall energy consumption. It is the Administration's firm conviction, however, that with a realistic energy-pricing policy the marketplace can achieve these potential energy savings more efficiently and effectively than the government can. We also believe that higher and more realistic energy prices will provide adequate incentives to industry to undertake the needed R&D, except in the case of long-term, high-risk research.

The ERAB recommendations were somewhat vague and provided no recommendations of specific research needed. While need for additional conservation measures to be taken is easily recognizable, the means by which they may be done are currently available. Conservation R&D should therefore be directed toward more basic understanding of the various processes involved in energy utilization efficiencies. In line with this feeling, work is continuing on understanding combustion processes. Work is also going forward on offsetting the effects of air quality degradation within buildings as infiltration losses are minimized. We feel that these are the appropriate activities for Federal expenditures.

We are in total agreement with the conclusions of the Energy Research Advisory Board report concerning concentrating conservation research in the area covered by the Energy Conversion and Utilization Technologies program. In FY 1983, the budget for such research is $17.5 million, an increase of $9.1 million over the FY 1982 appropriation. Our energy conservation research program in FY 1983 will include all generic long-range research that formerly had been in the end-use conservation offices.

Industrial conservation projects previously undertaken by DOE were conducted when energy costs were artificially low and the private sector had fewer incentives to support conservation research. We believe that reliance on market forces, as exemplified by the President's action to decontrol petroleum prices, will provide adequate incentives to industry for undertaking conservation-related R&D. The Federal role is no longer to support technology development in order to accelerate the introduction of new technologies. The focus is on expanding the scientific knowledge through more fundamental research activities. This will enable private industry to develop new conservation technologies and products which are technically and economically promising.

Question 14: Mr. Secretary, your FY 1983 budget proposal will set the SPR program back an entire year (completion in 1990 instead of 1989); it proposes to defer 28% of FY 82 facilities construction funding; OMB cut your request for FY 83 facilities construction funds by more than half; and your oil procurement funding request represents a cut of 44% from last year. Oil prices are declining, oil is available. Why are you cutting back this program? Isn't this a national security program?

Answer: It is true that a large SPR is a national security asset and that oil market conditions are more favorable for SPR oil purchases than they have been in the recent past. However, I would take exception to the statement that our proposed FY 1983 SPR oil acquisition program is in any way a program reduction. The reasons for the decrease in annual budget authority for SPR oil acquisition from FY 1982 to FY 1983 is that, because of oil market conditions and our aggressive oil fill performance of the past year, the purchasing power of our FY 1982 and prior-year funds was increased over our original projections. From FY 1982 and prior-year funding, we can expand the Reserve inventory to approximately 336 million barrels, nearly the full extent of permanent storage capacity by the end of FY 1983. Thus, our requirement for added oil funding in FY 1983 was reduced, and this is good news to all of us.

The FY 1983 SPR facilities program does involve a one-year slip in the schedule for the 140 million-barrel Big Hill site, a slip that will extend the completion date for the 750 MMB program from 1989 to 1990, but which will not actually affect oil fill levels until 1987. At that time, the SPR will be more than two-thirds filled, and the Nation considerably less vulnerable as a result. A one-year rescheduling, therefore, will not alter preparedness in a major way, and represents the kind of decision which has to be made in trading off fiscal and program considerations.

Question 15: Last year you promised that there would be no amnesty for oil companies who have overcharged customers. Do you stand by that pledge? What are you doing to collect overcharges? Specifically, how does your budget reflect this commitment?

What do you plan to do with the money you recover as a result of settlements or prosecutions of overcharge cases?

Answer: As has been said many times before, there will be no amnesty for those who have obtained unlawful benefits.

The Enforcement Program in FY 1983 will essentially involve the litigation of cases for alleged oil pricing violations not resolved during FY 1982. The program in FY 1982 consists of the completion of audit files for all unfinished enforcement cases, the resolution of these cases through negotiated settlements, and the preparation of cases not settled for litigation. All cases not resolved by September 30, 1982 will be subject to administrative and judicial litigation under this budget request.

The monies collected as a result of settlements, will, when possible, be refunded to the harmed customers. When it is impractical or impossible to identify particular overcharged customers, other remedies will be considered, including deposit in the U.S. Treasury as miscellaneous receipts or in an escrow account in the U.S. Treasury, pending formulation of a more customer-specific remedy.

Question 16. What method does the administration consider the cheapest and most appropriate method for financing SPR oil purchases?

Answer. The President, in his FY 1983 budget, proposes continued use of conventional Federal tax and borrowing resources to finance SPR oil purchases, plus continued use of the off-budget accounting method for such purchases which was established by Omnibus Budget Reconciliation Act of 1981.

Question 17: In your confirmation hearing of January 12, 1981, Senator Johnston asked you "It is also evident that the capacity to store oil in the SPR must be increased at a substantially faster rate than is currently planned. Will you report to the Committee at the earliest convenient time concerning your plans to expand the capacity of the SPR?"

Your answer was: "I share your concern for expanded capacity and will report to the Committee on our plans as we develop them."

We are now severely capacity-limited in fill rates for SPR. When are you going to address this issue?

Answer: We have addressed this issue extensively and the President's FY 1983 budget reports our plans to change the SPR facilities schedule. For example, we acted in February of 1981 to seek EPA approval for an accelerated rate of brine disposal at the SPR Bryan Mound site. We achieved approval of this acceleration and have increased our near-term storage capacity projection, including an increase of 47 million barrels in the storage level by the end of FY 1985 over previous estimates.

Question 18: To make the SPR credible, doesn't the Administration have to have a policy for use of SPR in a disruption? What is your policy?

Answer: The current SPR Distribution Plan, which became effective November 15, 1979, following Congressional review, details alternative ways to draw down and distribute SPR oil, through price competition, or at a controlled price, either within or outside of reguatory programs.

This plan allows the President to draw down the SPR to mitigate severe supply interruptions or fulfill our International Energy Program obligations. Such a plan is not for small-scale or short-lived interruptions where private stocks can offset the problem.

We feel it neither practicable nor desirable to prepare in advance an implementation plan with specific predetermined plans for rate, amount, timing of drawdown and method of oil distribution. Rather, consistent with the current SPR Distribution Plan, any implementation plan should permit maximum flexibility for SPR use in order to deal with severe disruptions. Also, since it is unlikely that we will know the length and severity of a disruption at the outset, rigid plans to draw down and distribute the SPR oil make little sense.

We are developing, however, an SPR logistics distribution plan, including implementation procedures and legal and management requirements, necessity for the effective distribution and sale of SPR oil.

Question 19

NUCLEAR WASTE POLICY

Question:	Does the Administration support S. 1662, the Nuclear Waste Policy Act reported by this Committee last session?
Answer:	The Administration recognizes the need for nuclear waste legislation and is hopeful that such legislation can be enacted this session. Although many of the provisions of S. 1662 are acceptable, there are some troublesome provisions; e.g., the acceptance of long-term storage as an alternative to disposal; the establishment of a Federal AFR; Federal transportation responsibilities; an unconstitutional legislative veto of the Administration's site recommendations; and Section 202(c) which precludes any defense waste ever being disposed of in a Federal waste repository. Also, though parallel effort on three sites is appropriate, as specified in the bill, there should be a clear understanding that if one of the sites proves unacceptable, the whole program is not delayed until another site is found and qualified.

Question 19 (Cont'd.)

Question: Does the Administration favor attempting to establish a policy for the disposal of defense nuclear wastes in the context of S. 1662? If so, what are your recommendations for such a policy?

Answer: The Administration believes that it is important to have in place as quickly as possible legislation addressing the disposal of commercially generated high-level waste. Such legislation will be less controversial if it remains neutral on the subject of defense high-level waste. PL 97-90 directs the President to prepare by June 1983 a plan for the disposal of defense high-level and transuranic waste. This Congressionally required report in lieu of S. 1662 should be the vehicle for addressing the issue of defense waste disposal.

Question 19 (Continued)

QUESTION: Does the administration favor addressing the matter of nuclear fuel reprocessing in S.1662? If so, what provisions would you want to include?

ANSWER: The Administration believes that some legislation may eventually be required to facilitate commercial reprocessing by the private sector. At this time, however, the Administration would not be in favor of introducing new issues into the ongoing deliberation on waste management legislation.

DOE DISMANTLEMENT

Question 20

The Congressional Budget Office prepared at Senator Domenici's request an analysis of the proposed DOE reorganization. The analysis, dated February 3, 1982, estimated that the reorganization of DOE would save approximately $3 million, but the cost of reorganization would cost approximately $3 million. Therefore, CBO concluded:

> "Reorganization, by itself, is unlikely to result in significant budget savings."

What do you estimate that the dismantlement of DOE would save? Could you provide us with a detailed itemization?

Answer

Actions taken to reduce or eliminate Energy Department activities, together with the reorganization of Federal energy programs will produce in FY 1983, estimated budget authority savings of $1.3 billion and employment reductions of 3,800 workyears from present estimates of FY 1982 levels.

It should be noted that while dollar savings are expected, they are not as such the primary motivation for the reorganization of Federal energy functions. Rather, improved efficiency and effectiveness in accomplishing the energy role of Federal government will be achieved by consolidating energy functions in existing cabinet agencies. In particular, the reorganization will:

- improve the integration of energy into overall economic policy.
- maintain the synergistic relationship among energy research and development and defense programs and focus those activities in one integrated organization.
- place resource management functions in the agency primarily responsible for the stewardship, preservation, and development of the Nation's natural resources.

Steps have already been taken by the Administration to achieve a reorientation of energy programs to emphasize long-term, high-risk energy research and development; national defense activities; and contingency planning for response to energy emergencies. There has been a concurrent reduction of subsidy programs for commercial production of energy technologies.

The fiscal 1983 budget for energy programs reflects both the reorganization of Federal energy programs and many programmatic adjustments responsive to the priorities set forth above. In preparing the staffing and support funding requests in the budget, estimates were made of the resources needed to support the total program in the budget. Specific savings resulting from reorganization per se cannot be separated from savings resulting from reductions in program activities, redirection of policy initiatives, overhead adjustments to reflect proposed program levels, and improvements expected in productivity and efficiency of operations. The funding and staffing levels for energy-related activities contained in the President's Budget for fiscal year 1983 reflect all of the above actions including reorganization. It is not possible in this situation to isolate program reduction savings from reorganization savings. An attempt to do so would have to be based on purely arbitrary factors.

It is important to recognize that beyond the short-term savings flowing from reorganization in fiscal year 1983 we can expect to realize continuing long-term savings from reduced overhead and more efficient use of resources. In fact, the consolidation of energy programs in existing agencies provides growing opportunities for additional savings in the future as the energy programs become fully integrated in their new environment and additional opportunities for sharing of systems and resources can be identified.

POSTHEARING QUESTIONS
from
HONORABLE HENRY M. JACKSON
for the
FEBRUARY 23, 1982 HEARING
before the
COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE

WITNESS SECRETARY JAMES B. EDWARDS

Questions 1 and 2

Question 1: Will you provide the Committee with copies of the Holifield budget history tables?

Answer: Multiple copies of the Holifield budget history tables were delivered to the Committee office on or about February 11, 1982. An additional copy for your personal use is enclosed.

Question 2: Will you provide the Committee with copies of the Department's planned expenditures for FY 1983 on a state-by-state basis?

Answer: The Cost-By-State tables have just been completed and were delivered to the Committee on or about February 25, 1982. An additional copy for your personal use is enclosed.

Q.3. The February 21, 1982, issue of Business Week contains a story which alleges that Under Secretary Fiske has not yet divested himself of the stock holdings which he has in General Dynamics. What is the situation with regard to this matter? When do you expect it to be resolved?

A. The story was inaccurate and unfair to Mr. Fiske. The true situation is set forth in a letter to the Editor of Business Week from the Counsel to the President, a copy of which is attached.

THE WHITE HOUSE
WASHINGTON

February 22, 1982

Dear Sir:

In the "Washington Outlook" section of the February 22 issue of Business Week, it was reported that, "[m]embers of the White House legal counsel's office are pressuring the Energy Department's third-ranking official, Under Secretary Guy W. Fiske, either to divest himself of a stock portfolio reported to total $300,000 or relinquish his post." This statement is not accurate.

Prior to accepting his appointment as Under Secretary of Energy, Mr. Fiske was Executive Vice President of General Dynamics Corporation and Chairman of the Board of Asbestos Corporation, Ltd. Because of these positions and a successful business career, his financial portfolio was complex. It included interests in several energy concerns, the retention of which were prohibited by section 602(a) of the Department of Energy Organization Act. Before assuming office, and aware of the substantial personal financial loss that would be incurred, Mr. Fiske voluntarily agreed to a scheduled divestiture of those interests. The divestiture plan, incorporated in a waiver granted Mr. Fiske by Secretary Edwards, was reviewed without objection by the Office of Government Ethics and the Senate Committee on Energy and Natural Resources. The plan has been and continues to be a matter of public record.

The General Counsel of the Department of Energy has advised that Mr. Fiske has faithfully complied with the divestiture agreement and the terms of the waiver granted by the Secretary. The Counsel's Office has never had reason to contact Mr. Fiske directly or indirectly to urge compliance with the terms of the agreement.

It is unfortunate that this mischaracterization occurred. Such can only hamper the Administration's efforts to attract highly qualified persons, such as Mr. Fiske, into Government service.

Sincerely,

Fred F. Fielding
Counsel to the President

Editor
Business Week
39th Floor
1221 Avenue of the Americas
New York, New York 10020

JACKSON

4. Q. Re: Power Marketing Administration

Mr. Secretary, your proposed budget recommends that the budget authority for the Power Marketing Administrations be increased from $532 million in FY 1982 to $712 million in FY 1983. The bulk of this increase is an estimated $175 million increase in the borrowing authority to be used by the Bonneville Power Administration.

For what purposes do you intend that this increased borrowing authority be used? More specifically, how much of this additional borrowing would be done under the Federal Columbia River Transmission System Act, which authorizes borrowing "to assist in financing the construction, acquisition, and replacement of the transmission system...", and how much would be under the Pacific Northwest Electric Power Planning and Conservation Act, which established an increased borrowing authority "reserved for the purpose of providing funds for conservation and renewable resource loans and grants..."?

On what basis did you (or will you) establish the amount of borrowing authority to be utilized for the purpose of providing funds for conservation and renewable resource loans and grants?

A. The increase in BPA's proposed borrowing authority from FY 1982 to 1983 is $175.3 million. The borrowing authority in each of these two years would be used as follows:

Purpose	FY 1982	FY 1983
	($ in millions)	
Transmission System Construction (Federal Columbia River Transmission System Act)	155.0	179.0
Conservation and Renewable Resource Loans and Grants (Pacific Northwest Electric Power Planning & Conservation Act)	124.7	276.0
	279.7	455.0

Of the additional $175.3 million in FY 1983, $151.3 million is for conservation and renewable resource loans and grants, and $24.0 million is for transmission system construction.

The level of funding for conservation programs is based on BPA preliminary estimates of the amount of conservation potential in various sectors in the region, and on BPA's best estimates of levels of payment which will effectively achieve that conservation. Most of BPA's expenditures for conservation will continue to provide benefits to the region's ratepayers for many years, over the life of the conservation measures. It is appropriate, therefore, to fund these programs out of borrowing and amortize the investment over the life of the measures, thereby spreading the cost of the measures among both current and future ratepayers.

The level of funding for the transmission system construction program is based upon the addition of transmission facilities to the Federal Power System to assure an adequate, safe, efficient, and reliable electric service to the Pacific Northwest. The increased level of borrowing reflects price escalation and the increased circuit-miles of transmission to be added in FY 1983.

QUESTION 5: Mr. Secretary, isn't this the real reason the Administration is proposing to dismantle DOE, to ensure that Government cannot have a role in domestic energy policy?

ANSWER: In no way does the Administration suggest or intend that the Government have no role in domestic energy policy.

The President has removed all price and allocation controls on crude oil and petroleum products, effectively terminating all Federal regulatory activities in the oil and petroleum marketplace. The President also recommended that expensive Federally financed energy commercialization efforts be terminated--a recommendation that was largely adopted by the Congress.

In view of all this, it is logical and necessary to review the rationale for continuing the Department of Energy. Given that no further role for the Department is contemplated in petroleum marketplace management and that its efforts to finance the commercialization of energy technologies has been greatly reduced, the Administration concludes that:

- A Cabinet-level energy department is no longer necessary, and
- Management of critical energy functions (including research and development, nuclear weapons, and basic scientific research) can be more efficiently carried out in various other Cabinet-level departments.

The President's decision to reorganize Federal energy functions reflects this conclusion and the organizational requirements of the Administration's energy policy.

DOE DISMANTLEMENT

Question 6

The Congressional Budget Office prepared at Senator Domenici's request an analysis of the proposed DOE reorganization. The analysis, dated February 3, 1982, estimated that the reorganization of DOE would save approximately $3 million, but the cost of reorganization would cost approximately $3 million. Therefore, CBO concluded:

> "Reorganization, by itself, is unlikely to result in significant budget savings."

What do you estimate that the dismantlement of DOE would save? Could you provide us with a detailed itemization?

Answer

Actions taken to reduce or eliminate Energy Department activities, together with the reorganization of Federal energy programs will produce in FY 1983, estimated budget authority savings of $1.3 billion and employment reductions of 3,800 workyears from present estimates of FY 1982 levels.

It should be noted that while dollar savings are expected, they are not as such the primary motivation for the reorganization of Federal energy functions. Rather, improved efficiency and effectiveness in accomplishing the energy role of Federal government will be achieved by consolidating energy functions in existing cabinet agencies. In particular, the reorganization will:

- improve the integration of energy into overall economic policy,
- maintain the synergistic relationship among energy research and development and defense programs and focus those activities in one integrated organization.
- place resource management functions in the agency primarily responsible for the stewardship, preservation, and development of the Nation's natural resources.

Steps have already been taken by the Administration to achieve a reorientation of energy programs to emphasize long-term, high-risk energy research and development; national defense activities; and contingency planning for response to energy emergencies. There has been a concurrent reduction of subsidy programs for commercial production of energy technologies.

The fiscal 1983 budget for energy programs reflects both the reorganization of Federal energy programs and many programmatic adjustments responsive to the priorities set forth above. In preparing the staffing and support funding requests in the budget, estimates were made of the resources needed to support the total program in the budget. Specific savings resulting from reorganization per se cannot be separated from savings resulting from reductions in program activities, redirection of policy initiatives, overhead adjustments to reflect proposed program levels, and improvements expected in productivity and efficiency of operations. The funding and staffing levels for energy-related activities contained in the President's Budget for fiscal year 1983 reflect all of the above actions including reorganization. It is not possible in this situation to isolate program reduction savings from reorganization savings. An attempt to do so would have to be based on purely arbitrary factors.

It is important to recognize that beyond the short-term savings flowing from reorganization in fiscal year 1983 we can expect to realize continuing long-term savings from reduced overhead and more efficient use of resources. In fact, the consolidation of energy programs in existing agencies provides growing opportunities for additional savings in the future as the energy programs become fully integrated in their new environment and additional opportunities for sharing of systems and resources can be identified.

JACKSON

APPLIANCE EFFICIENCY STANDARDS

7. QUESTION: In your nomination hearing on January 12, 1981, Senator Jackson asked you when the Department of Energy would issue the appliance efficiency standards which the law required to be issued by January 2, 1981. Your answer was: "I fully intend to comply with the requirements of the law pertaining to appliance efficiency standards." Have you issued those standards as the law requires? Have you complied with the law?

ANSWER: On February 17, 1981, DOE published a Notice of Intent in the Federal Register not to issue regulations until the standards analysis was reviewed for its sufficiency.

On July 29, 1981, the House Subcommittee on Energy and Power held an oversight hearing regarding the status of the appliance standards program; Joseph Tribble, Assistant Secretary for Conservation and Renewable Energy, and Hunter Chiles, Director of Office of Policy, Planning and Analysis, represented the Department of Energy. Mr. Tribble stated that DOE intended to re-propose appliance standards. Revision of the economic analysis for standards, based on 1981 tax law and more recent energy price projections, was completed in the fall of 1981. On November 30, 1981, the Department submitted a draft proposed rule to OMB for review. The Department's Office of General Counsel also reviewed and is revising the draft rule. These revisions are expected to be completed in the near future.

The Department recognizes its responsibilities under the law as regards these appliance standards, and has been working hard to formulate regulations pursuant to these duties. The requisite technical analyses and other preparatory work has been time-consuming, but the Department feels that it is important for this work to be done well. Every step possible is being taken to expedite this process.

Question 8; In your confirmation hearing of January 12, 1981, Senator Johnston asked you "It is also evident that the capacity to store oil in the SPR must be increased at a substantially faster rate than is currently planned. Will you report to the Committee at the earliest convenient time concerning your plans to expand the capacity of the SPR?"

Your answer was: "I share your concern for expanded capacity and will report to the Committee on our plans as we develop them."

We are now severely capacity-limited in fill rates for SPR. When are you going to address this issue?

Answer: We have addressed this issue extensively and the President's FY 1983 budget reports our plans to change the SPR facilities schedule. For example, we acted in February of 1981 to seek EPA approval for an accelerated rate of brine disposal at the SPR Bryan Mound site. We achieved approval of this acceleration and have increased our near-term storage capacity projection, including an increase of 47 million barrels in the storage level by the end of FY 1985 over previous estimates.

JACKSON

9a. Q. Your budget books devote a total of three sentences to your justifying your proposal to eliminate the State and Local Assistance programs under the Energy Conservation line item. These programs include low-income weatherization and grants to states for weatherizing schools and hospitals and funding State energy offices.

"There is clear evidence that the marketplace has responded favorably to higher energy prices. Oil price decontrol and the President's economic recovery proposals will accelerate this trend. Therefore, further Federal expenditures for energy conservation grant programs are unnecessary."

Would you explain how it is that higher energy prices make the low-income weatherization program unnecessary?

A. Higher energy prices have induced energy conservation in all sectors of the economy. In addition, the Administration believes that State and local governments should be responsible for decisions concerning public assistance to the poor and needy. We believe that State and local governments are better able to assess their citizens' needs for weatherization assistance and to devise more efficient and effective means of providing it to the truly needy. However, the Federal Government is indeed concerned about the welfare and well-being of the poor and needy in this country. Therefore, the FY1983 budget will continue to provide substantial Federal funds that State and local governments can use for weatherizing efforts. Up to 15 percent of the $1.3 billion proposed for low-income home energy assistance administered by the Department of Health and Human Services can be used for weatherization efforts, and such activities are authorized under the $3.5 billion Community Development Block Grant Program administered by the Department of Housing and Urban Development.

9b. Q. Is your proposal to eliminate the EPCA and ECPA grants to your State and local governments consistent with the new Federalism? How?

A. EPCA/ECPA grants were awarded to assist States in the development and implementation of State energy conservation programs. The intent was to provide the States with planning and startup assistance considered necessary to reach the objectives of the legislation. The States have established and implemented energy conservation measures and have essentially met the legislatively mandated measures (including lighting standards, vanpools, procurement assistance, thermal standards and Right-Turn-On-Red). Additional funding provided by the Congress has enabled the States to build capacity for management of energy conservation programs, provide technical assistance and information-sharing on conservation measures and evaluate the program impacts.

This program has accomplished its objectives wherever feasible in the 50 States and 7 Territories and has essentially met the energy conservation reduction goals. In light of the widespread public awareness of energy conservation benefits and the high level of individual and business investment in energy conservation, there is no need for further Federal support in this area and the program should be terminated.

JACKSON

10. Q. In November, 1981, the Research and Development Panel of the Energy Research Advisory Board submitted to your Deputy Secretary at his request a report on Federal Energy R&D Priorities. Among the conclusions were:

> "The overall level of Federal R&D funding for conservation and improved utilization programs is too low in view of their potential for energy improvements and the inability of many important energy-consuming sectors to conduct R&D."

Since then, you have proposed even greater cuts in energy conservation research. Do you disagree with the conclusions of the Energy Research Advisory Board?

Would you provide this Committee with a response to each of the conclusions of the Report of the Research and Development Panel?

A. We agree with the Energy Research Advisory Board (ERAB) that in the areas of conservation and improved utilization there exists a large potential for increasing the efficiency of the Nation's overall energy consumption. It is the Administration's firm conviction, however, that with a realistic energy-pricing policy the marketplace can achieve these potential energy savings more efficiently and effectively than the government can. We also believe that higher and more realistic energy prices will provide adequate incentives to industry to undertake the needed R&D, except in the case of long-term, high-risk research.

The ERAB recommendations were somewhat vague and provided no recommendations of specific research needed. While need for additional conservation measures to be taken is easily recognizable, the means by which they may be done are currently available. Conservation R&D should therefore be directed toward more basic understanding of the various processes involved in energy utilization efficiencies. In line with this feeling, work is continuing on understanding combustion processes. Work is also going forward on offsetting the effects of air quality degradation within buildings as infiltration losses are minimized. We feel that these are the appropriate activities for Federal expenditures.

We are in total agreement with the conclusions of the Energy Research Advisory Board report concerning concentrating conservation research in the area covered by the Energy Conversion and Utilization Technologies program. In FY 1983, the budget for such research is $17.5 million, an increase of $9.1 million over the FY 1982 appropriation. Our energy conservation research program in FY 1983 will include all generic long-range research that formerly had been in the end-use conservation offices.

Industrial conservation projects previously undertaken by DOE were conducted when energy costs were artificially low and the private sector had fewer incentives to support conservation research. We believe that reliance on market forces, as exemplified by the President's action to decontrol petroleum prices, will provide adequate incentives to industry for undertaking conservation-related R&D. The Federal role is no longer to support technology development in order to accelerate the introduction of new technologies. The focus is on expanding the scientific knowledge through more fundamental research activities. This will enable private industry to develop new conservation technologies and products which are technically and economically promising.

Question 11: Mr. Secretary, your FY 1983 budget proposal will set the SPR program back an entire year (completion in 1990 instead of 1989); it proposes to defer 28% of FY 82 facilities construction funding; OMB cut your request for FY 83 facilities construction funds by more than half; and your oil procurement funding request represents a cut of 44% from last year. Oil prices are declining, oil is available. Why are you cutting back this program? Isn't this a national security program?

Answer: It is true that a large SPR is a national security asset and that oil market conditions are more favorable for SPR oil purchases than they have been in the recent past. However, I would take exception to the statement that our proposed FY 1983 SPR oil acquisition program is in any way a program reduction. The reasons for the decrease in annual budget authority for SPR oil acquisition from FY 1982 to FY 1983 is that, because of oil market conditions and our aggressive oil fill performance of the past year, the purchasing power of our FY 1982 and prior-year funds was increased over our original projections. From FY 1982 and prior-year funding, we can expand the Reserve inventory to approximately 336 million barrels, nearly the full extent of permanent storage capacity by the end of FY 1983. Thus, our requirement for added oil funding in FY 1983 was reduced, and this is good news to all of us.

The FY 1983 SPR facilities program does involve a one-year slip in the schedule for the 140 million-barrel Big Hill site, a slip that will extend the completion date for the 750 MMB program from 1989 to 1990, but which will not actually affect oil fill levels until 1987. At that time, the SPR will be more than two-thirds filled, and the Nation considerably less vulnerable as a result. A one-year rescheduling, therefore, will not alter preparedness in a major way, and represents the kind of decision which has to be made in trading off fiscal and program considerations.

Question 12: Last year you promised that there would be no amnesty for oil companies who have overcharged customers. Do you stand by that pledge? What are you doing to collect overcharges? Specifically, how does your budget reflect this commitment?

What do you plan to do with the money you recover as a result of settlements or prosecutions of overcharge cases?

Answer: As has been said many times before, there will be no amnesty for those who have obtained unlawful benefits.

The Enforcement Program in FY 1983 will essentially involve the litigation of cases for alleged oil pricing violations not resolved during FY 1982. The program in FY 1982 consists of the completion of audit files for all unfinished enforcement cases, the resolution of these cases through negotiated settlements, and the preparation of cases not settled for litigation. All cases not resolved by September 30, 1982 will be subject to administrative and judicial litigation under this budget request.

The monies collected as a result of settlements, will, when possible, be refunded to the harmed customers. When it is impractical or impossible to identify particular overcharged customers, other remedies will be considered, including deposit in the U.S. Treasury as miscellaneous receipts or in an escrow account in the U.S. Treasury, pending formulation of a more customer-specific remedy.

Question 13: To make the SPR credible, doesn't the Administration have to have a policy for use of SPR in a disruption? What is your policy?

Answer: The current SPR Distribution Plan, which became effective November 15, 1979, following Congressional review, details alternative ways to draw down and distribute SPR oil, through price competition, or at a controlled price, either within or outside of reguatory programs.

This plan allows the President to draw down the SPR to mitigate severe supply interruptions or fulfill our International Energy Program obligations. Such a plan is not for small-scale or short-lived interruptions where private stocks can offset the problem.

We feel it neither practicable nor desirable to prepare in advance an implementation plan with specific predetermined plans for rate, amount, timing of drawdown and method of oil distribution. Rather, consistent with the current SPR Distribution Plan, any implementation plan should permit maximum flexibility for SPR use in order to deal with severe disruptions. Also, since it is unlikely that we will know the length and severity of a disruption at the outset, rigid plans to draw down and distribute the SPR oil make little sense.

We are developing, however, an SPR logistics distribution plan, including implementation procedures and legal and management requirements, necessary for the effective distribution and sale of SPR oil.

PRIVATE STOCKPILING OF OIL

14. Q: What is your estimate of the annual carrying charge associated with storing a barrel of oil? Do you think private companies will be willing to pay this sort of cost year after year to protect themselves from a future disruption? What is happening to private stocks now? Are they increasing or decreasing? By how much?

A: Private oil storage facility use charges could vary between $1-4 per barrel per year, depending on type of facility, location, length of time to hold stocks, and excess tankage capacity available. Floating tanker storage costs for crude range from $1.20 to $3.50 per barrel per year, depending on tanker size, length of contract and state of tanker market. Product storage costs would be significantly higher, because they involve smaller tankers (now in relatively high demand) that can carry "clean" cargoes. Finally, there is the capital cost of the investment in oil, which depends on the price of oil and the interest rate. For example, at $34 per barrel for crude, and a 15 percent interest rate, the annual capital cost would be $5.10 per barrel.

We expect industry will hold stocks in excess of normal working inventories only if prospective gains from price increases, including those during a supply disruption, exceed the costs of holding the oil (including any risk of price depreciation). If industry thinks the Federal Government will not control price or allocate oil during a shortfall, there will be a greater incentive to hold stocks.

PRIVATE STOCKPILING OF OIL (Continued)

In terms of what is happening to private stocks, total domestic private stocks of crude oil and refined products have declined from a high of 1,357 million barrels in August 1980 to 1,209 million barrels by February 12, 1982 -- an average monthly decline of 25 million barrels. However, the ratio of stocks to consumption in the U.S. is the highest in history. The August 1980 levels were due in part to a level of demand well below the industry's predictions. In part, also, the industry was constrained to continue to lift foreign crude oil at rates governed by existing long-term contracts. The recent decline in stocks reflects the industry's ability to reduce foreign liftings, high interest rates, and the expectations that crude oil prices may decline in the near term.

Question 15. What method does the administration consider the cheapest and most appropriate method for financing SPR oil purchases?

Answer. The President, in his FY 1983 budget, proposes continued use of conventional Federal tax and borrowing resources to finance SPR oil purchases, plus continued use of the off-budget accounting method for such purchases which was established by Omnibus Budget Reconciliation Act of 1981.

Question 16

NUCLEAR WASTE POLICY

Question: Does the Administration support S. 1662, the Nuclear Waste Policy Act reported by this Committee last session?

Answer: The Administration recognizes the need for nuclear waste legislation and is hopeful that such legislation can be enacted this session. Although many of the provisions of S. 1662 are acceptable, there are some troublesome provisions; e.g., the acceptance of long-term storage as an alternative to disposal; the establishment of a Federal AFR; Federal transportation responsibilities; an unconstitutional legislative veto of the Administration's site recommendations; and Section 202(c) which precludes any defense waste ever being disposed of in a Federal waste repository. Also, though parallel effort on three sites is appropriate, as specified in the bill, there should be a clear understanding that if one of the sites proves unacceptable, the whole program is not delayed until another site is found and qualified.

Question 16 (Cont'd.)

Question: Does the Administration favor attempting to establish a policy for the disposal of defense nuclear wastes in the context of S. 1662? If so, what are your recommendations for such a policy?

Answer: The Administration believes that it is important to have in place as quickly as possible legislation addressing the disposal of commercially generated high-level waste. Such legislation will be less controversial if it remains neutral on the subject of defense high-level waste. PL 97-90 directs the President to prepare by June 1983 a plan for the disposal of defense high-level and transuranic waste. This Congressionally required report in lieu of S. 1662 should be the vehicle for addressing the issue of defense waste disposal.

Question 16 (Continued)

QUESTION: Does the administration favor addressing the matter of nuclear fuel reprocessing in S.1662? If so, what provisions would you want to include?

ANSWER: The Administration believes that some legislation may eventually be required to facilitate commercial reprocessing by the private sector. At this time, however, the Administration would not be in favor of introducing new issues into the ongoing deliberation on waste management legislation.

Question 17. SPR FILL. In your opinion, is now a good time to be buying oil for the SPR, since there is a worldwide surplus and the price is falling (from about $35.50 a year ago to about $34.00 now)?

The administration bought oil for the SPR at a rate of about 300,000 b/d for fiscal year 1981. At what rate did you buy oil under the budget for the first quarter of fiscal year 1982? What rate do you project for the second quarter of fiscal year 1982? The second half of fiscal year 1982?

At what rate will you buy oil under the budget proposed for fiscal year 1983?

Where will that leave us in terms of the total amount of oil in storage at the end of fiscal years 1982 and 1983?

How much oil in the SPR is "enough"?

Shouldn't we buy as much oil as we can now while there is an oversupply and the price of oil is falling?

Shouldn't we try to acquire capacity to store oil in every reasonable way possible? Have you looked into options such as leasing unused private storage space (either salt domes or on-shore tanks) and idle supertankers? What did you find?

Please provide the Committee with your best estimate of the costs of leased storage of various kinds. What would be the estimated facilities costs associated with maintaining the SPR fill rate at 300,000 b/d in fiscal years 1982 and 1983?

Answer. Market conditions are favorable at the present time for acquiring oil for the Reserve. During the first three months of fiscal year 1982, the Reserve was filled at an average rate of 338,391 barrels per day and a total storage level of 230.3 million barrels was reached by the end of calendar year 1981. As of February 22, 1982, the Reserve inventory was 239.0 million barrels, with a further 11 million barrels scheduled for delivery through the end of March.

Based on this schedule, we would estimate an average daily fill rate of 230,000 barrels per day in the second quarter of this fiscal year.

The budget projects a cumulative storage level of 266.9 million barrels for the end of fiscal year 1982, which would imply an average daily fill rate of approximately 90,000 barrels per day for the second half of the calendar year. However, we can now expect to meet or even exceed this estimate.

The President's FY 1983 budget projects a cumulative SPR fill level of 343.1 million barrels at the end of fiscal year 1983, an increase of 76.2 million barrels from the level projected for the end of fiscal year 1982. This represents an average daily fill rate during FY 1983 of 209,000 b/d and fully fills available SPR storage capacity.

The President's FY 1983 budget projects cumulative SPR oil storage levels of 266.9 MMB at the end of fiscal year 1982 and 343.1 million barrels at the end of fiscal year 1983.

Our commitment to having 750 million barrels in the Strategic Petroleum Reserve by the end of this decade remains firm. Too, our policy of filling available SPR oil storage capacity in FY 1983 as rapidly as possible remains firm, both because we seek to reduce our vulnerability to oil supply interruptions and because current oil market conditions permit rapid rate of fill. Whether this is "enough" or not has to be put in the context that we are making great efforts and having considerable success in increasing the SPR inventory. Our preparedness is better today than several years ago and should be much better in the future when such factors as U.S. oil imports, U.S. oil consumption, private-sector storage capacity, and SPR are considered.

Now that we have arranged for delivery of nearly all the oil we plan to have delivered to permanent SPR oil facilities in fiscal year 1982, we are again looking at the advantages and disadvantages of arranging for interim storage of additional crude oil in private sector storage facilities. With respect to acquiring additional capacity, we must bear in mind a number of factors, including:

-- costs
-- whether the acquisition would displace private stocks
-- suitability in terms of location, pipeline access, etc.
-- timing.

Use of steel tanks and tankers has been studied a number of times since 1975. Generally, decisions were made not to use such approaches because of a number of factors including cost and implementation problems.

With respect to interim storage facilities costs, we have identified several options, including some underground storage available at approximately $.15 per barrel per month, some floating storage which could be available at approximately $.20 per barrel per month, and a limited amount of onshore tankage available for approximately $.20 to $.35 per barrel per month. It was assumed that existing storage facilities currently satisfy environmental regulations. Environmental costs were considered for time charter of floating storage.

Achievement of a 300 MBD fill rate in FY 1982 and FY 1983 would require acquisition of storage capacity and oil of 70-80 million barrels over the levels in the President's FY 1983 budget. This would require utilizing multiple types of interim storage, and the total costs would be directly dependent on the duration of such interim fill. It would be at least a year after the end of FY 1983 until the SPR permanent facilities would be available to accept the temporarily stored oil, and some oil such as that acquired in FY 1982 would have to be in interim storage for two years. The annualized cost of this storage could be in the range of $150 - $200 million.

Question 18. Mr. Secretary, in your statement before the Committee you repeatedly stated that the fill rate for the Strategic Petroleum Reserve will be greater in FY 1983 than it was in FY 1982. Isn't it true that all but 7 million barrels of oil to be delivered in FY 1983 was or will be purchased with FY 1982 funds? Therefore, isn't it true that based on a daily rate of fill, the FY 1983 proposed budget will purchase only 19,000 barrels per day for delivery in FY 1983 and the balance of the FY 1983 budget will be used to purchase oil for delivery in FY 1984? Isn't it true that if the proposed FY 1983 budget were the exclusive source of funds to purchase oil for delivery in FY 1983, you could not achieve your projected fill rate for FY 1983?

Answer. The information you cite is essentially correct. From FY 1982 and prior year funds, we expect, assuming current market conditions continue, to be able to acquire a cumulative inventory of 336 million barrels (MMB). This means that only approximately 7 MMB in FY 1983 oil deliveries would need to be financed from the proposed $2.074 billion FY 1983 appropriation to the SPR Petroleum Account. This FY 1983 funding level will permit contracting for a total of 53 MMB--7 MMB for FY 1983 delivery and 46 MMB for FY 1984 delivery. Without continued availability of FY 1982 funding, the FY 1983 appropriation alone would not permit achieving a 209,000 barrel per day fill rate in FY 1983.

Question 19. GAO Report on SPR

The GAO in its report, "Strategic Petroleum Reserve: Substantial Progress Made, but Capacity and Oil Quality Concerns Remain", issued on December 31, 1981, recommended:

— Evaluate options for achieving an average annual fill rate of 300,000 barrels per day assuming the planned and ther SPR sizes. The evaluation, which should be available for fiscal year 1983 congressional budget deliberations, should assess costs and benefits of alternatives to constructing new underground storage facilities, including such options as leasing existing storage capacity.

Moreover, in the answers to prepared questions from Senator Jackson to Secretary Edwards from the hearing of December 10, 1981, before a Government Affairs Subcommittee, you replied:

> "Neither the original nor revised requests for FY 1983 on-budget SPR facilities funding include resources specifically for temporary leased storage facilities to permit the acquisition of oil in addition to the fill of permanent storage facilities."

Please provide for the Committee this evaluation which GAO recommended that you provide to the Congress.

In addition, if DOE commented on this GAO report, please provide these comments to the Committee.

Answer. Over the past year, we have evaluated in depth approximately a dozen options for permanent SPR storage facility configurations and schedules. Some of these are included in the SPR Acceleration Study which was provided to the General Accounting Office, and others will be addressed in the forthcoming report on SPR size. Further investigation of interim storage options is underway, as a part of our ongoing program planning process rather than as a formal study.

Our formal response to the GAO recommendation will be issued shortly and will be made available to the Committee.

APPENDIX V

“Federal Energy R. & D. Priorities,” Report of the Energy Research Advisory Board

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Department of Energy
Washington, D.C. 20585

December 4, 1981

Honorable W. Kenneth Davis
Deputy Secretary of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Dear Ken:

I am pleased to forward the Report of the Energy Research Advisory Board on Federal Energy RD&D Priorities. This report was prepared in response to your request on August 13, 1981, to review the relative merits of each major R&D program.

The Board is in full agreement that the Federal Government must continue to support research and development for the technologies upon which the nation's energy future depends. Although all the members (except for Philip Handler) participated in the development of this report and reached a consensus on most recommendations, there are a few statements that represent majority opinions where every member did not agree to every statement. Dissenting views on those recommendations for which overall agreement was not possible are included in the Appendices.

Sincerely,

Louis H. Roddis, Jr.
Chairman
Energy Research Advisory Board

Enclosure

cc:
Thomas J. Kuehn, ERAB
Joel Snow, ER-4

Department of Energy
Washington, D.C. 20585

December 4, 1981

Louis H. Roddis, Chairman
Energy Research Advisory Board
110 Broad Street
Charleston, SC 29401

SUBJECT: Letter of Transmittal of the R&D
Panel RD&D Priorities Report

Dear Lou:

This letter transmits to you the RD&D Priorities Report. The report contains inputs from all members of the Board, and except where minority views are presented, there is general agreement with its contents.

As you know, the methodology required members of the Panel to evaluate each R&D program in terms of a specific set of criteria. The evaluations were combined to arrive at composite figures of merit which were then reviewed and discussed by the R&D Panel. At the outset of this project, there was some uneasiness about the validity of the evaluation methodology. To guard against possible difficulties, each section of the report, after drafting by two members of the Panel, was reviewed and discussed thoroughly by the full Panel before final judgments were made.

I believe that the evaluation methodology worked quite well. It provided assurance that the key criteria were explicitly considered, and this helped us identify quickly the sources of agreement and disagreement. The second stage of the process provided for resolution of the areas of disagreement. Where necessary, members of the Board voted to arrive at final recommendations. You offered the opportunity to members to advance minority views, and such views are included in the final report.

The preparation of this report in such a short time was a formidable task. In my view, the Board did remarkably well to complete this study on time.

Sincerely,

John S. Foster, Jr.
R&D Panel Chairman

4094A

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FEDERAL ENERGY RD&D PRIORITIES

I. EXECUTIVE SUMMARY

Background

In a letter dated August 13, 1981, the Deputy Secretary of Energy asked for the advice of the Energy Research Advisory Board (ERAB) on DOE's R&D priorities and on "hard choices" the Department must soon make as to "which programs to pursue vigorously and which to de-emphasize based on a realistic appraisal of both our energy options and energy needs for the foreseeable future." This report of ERAB responds to that request in the context of continuing pressure for further reductions in DOE's budget. This report presents recommendations on priorities within DOE's non-defense R&D program and suggests where funding should be changed, either increased or decreased relative to the President's FY 82 budget request.

During the last year, major changes in policy have been made; these have already led to changes in DOE's objectives, strategies, R&D funding and internal allocations of R&D funds. In carrying out its study of DOE's R&D priorities, the ERAB has generally accepted these new policies and has confined its recommendations to matters of science, technology and engineering. In some areas, however, particularly in electric supply and conservation, the ERAB's application of these policies has resulted in somewhat different conclusions than those reflected in the President's FY82 budget. Moreover, the application of these policies has led to recommendations by the ERAB that differ significantly from those it made to the Secretary of Energy on September 5, 1980 in the interim report on research and development needs in which the Board applied funding policies of the previous administration.

Recommendations of this study resulted from application of both a new assessment methodology developed by the R&D Panel of ERAB and more conventional and traditional evaluation techniques. The new methodology required Board members to evaluate each R&D program in terms of a specific set of well defined criteria. This insured that each program was evaluated comprehensively by each member. The evaluations of all R&D Panel members were then combined numerically. These composite evaluations were then used as the basis for more traditional judgments, discussions and consensus building, leading to conclusions and recommendations by the Board. The salient findings of the Board are:

- Funding relative to the President's FY82 budget request for the science and technology base programs should be increased in some programs and remain the same in others. Within these programs high priority should be given to:

- research on the phenomena governing accumulation of CO_2 in the atmosphere from combustion of fossil fuels, climatic effects of this accumulation, tolerable levels of CO_2 and ways to control CO_2 accumulations

- research into acid rain, its causes, effects and control technologies

- In the electric supply sector, priority should be given to supporting:

  - nuclear waste isolation research and demonstration
  - conventional reactor systems and safety
  - the LMFBR base program
  - uranium enrichment R&D

- Programs in which reductions can be made include:

  - small reductions in magnetic fusion

  - significant reductions in the Clinch River breeder,* the light water breeder, electricity transmission, and high temperature geothermal

  - phase-out of funding for hydropower and magnetohydrodynamics

- The Board noted that the electric supply technology is receiving a fraction of DOE's funding that is substantially in excess of its contribution to present and future energy supplies.

- In fuels supply technologies, the Board believes that technologies such as enhanced oil and gas recovery, while urgent because of near term benefits, will be adequately supported by the private sector. DOE's support of these programs can thus be reduced. The Board also recommends that:

  - the major Federal effort in synthetic fuels research and development be directed at innovative concepts at the laboratory and small pilot-plant scale. In view of the financial guarantees available from DOE and the Synfuels Corporation, DOE's budget for cost-shared projects at the large pilot plant and demonstration-plant scale and for in situ shale recovery should be reduced.

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*See dissenting opinion and additional remarks in Appendix D.

  - the funding level for R&D directed at producing liquids and gases from biomass and the production of alcohol is at an appropriate level.
  - ERAB urges that the parts of Advanced Research and Environmental Control Technology R&D (FE) concerned with technologies to control SO_x, NO_x and particulates emissions be increased and strengthened at the expense of other activities in this program.

- On an overall basis within the Department of Energy, R&D funding for energy conservation and end-use technology is underfunded, particularly when compared with funding levels for supply technologies. A balance that better reflects the opportunities, importance, and nature of the Federal role in supporting private sector response needs to be achieved. This should be achieved by increases in funds allocated to buildings and community systems and industrial conservation.

- The Board believes that if its recommendations are implemented, a net reduction in DOE's budget will result.

II. INTRODUCTION

A. Background and Purpose

On April 30, 1980, the Deputy Secretary of Energy* requested that the Energy Research Advisory Board (ERAB) participate in the Department's review of the technology base component of its R&D programs by addressing the following concerns:

- The adequacy of the research underpinning for technology development programs
- Possible gaps or duplications of effort
- The balance among research performers in the universities, laboratories, and industry
- Significant R&D opportunities that our programs may be missing.

As a result of more than 16 public meetings during July and August 1980, a report was prepared by an R&D Panel and seven subpanels covering each of the major DOE program areas. This report titled, R&D Needs in the Department of Energy, was submitted to the Secretary of Energy on September 5, 1980, and recommended enhanced funding for a number of DOE program areas.

In the original request for an R&D study by ERAB, the Deputy Secretary expressed the view that this project should be a continuing effort through which ERAB would assist the Department in its R&D program evaluations. After the publication of the interim report, several members of the original panel continued to review various methodologies for evaluating R&D programs. On August 13, 1981, the Deputy Secretary* requested ERAB's recommendations on overall Federal energy R&D priorities specifically including the following concerns:

- The relative merits of each major R&D program with respect to such criteria as the technical and economic potential, urgency and lead time required, benefits and costs of Federal funding, contribution to energy security, health and environmental risks, and the appropriate Federal role;
- The appropriate R&D funding balance between electric power supply, fuels supply conservation, and technology base program areas;

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*See Appendix A.

- The appropriate program orientation and balance between research, development, and demonstration activities;

- The strategic R&D objectives for the near, mid, and long term.

In September 1981, the R&D Panel was restructured to include all members of ERAB who contributed individually to the evaluation of 49 program areas covering all energy R&D programs. The Panel met on September 24, 1981, to discuss the results of their evaluations (see Appendix B for details on methods and criteria) and to reach a consensus on its recommendations for R&D priorities. The R&D Executive Committee met on October 30, 1981, to revise the draft report before it was discussed and the body of the report approved by ERAB at its November 4-5, 1981 meeting.

In these times of budgetary restraints, it is imperative that maximum effectiveness be attained in the use of Federal R&D funds. It is essential that a rational basis for evaluating priorities and the proper balance of funding be used to allocate increasingly scarce fiscal resources. The purpose of this assessment is to provide the Secretary of Energy with ERAB's best advice toward the accomplishment of that goal. The ERAB devised a methodology for structuring the discussion of RD&D priorities and relative funding levels for energy RD&D. A brief description appears in section II.C.

B. Energy Policy Context of R&D: "The Federal Role".

Between our 1980 study and the present one a new Administration has re-defined the appropriate role of Federally-sponsored energy R&D. Differences in our conclusions and recommendations from the earlier study result to a considerable extent from this redefinition and our adherence to it -- with certain exceptions noted below.

The previous Administration defined an expansive role for Federally-sponsored R&D, including demonstration and commercialization. The new Administration, by contrast, proposes to:

- Drastically shift the emphasis from Federal sponsorship to reliance on the private sector. With few exceptions this includes total reliance on the private sector for demonstration and commercialization.

- Limit appropriate Federally-sponsored R&D to: 1) Basic energy science and technology base; 2) Energy R&D of a long-term high-risk character; and 3) Research on the health, safety, and environmental aspects of energy supply and use.

- Strive to reduce Federal expenditure and the Federal deficit.

ERAB's deliberations have reflected an expectation that Federal funds for R&D will be stringently limited for the foreseeable future. In evaluating R&D programs ERAB has conformed generally but not slavishly to this policy. We applaud greater reliance on the private sector whenever possible. We applaud the restoration of a free market in petroleum. ERAB believes that much, perhaps most, of new energy supplies and greater efficiency in energy use will in fact be achieved by higher energy prices. But ERAB is concerned that some energy R&D of great potential significance for the achievement of the Nation's energy goals will fall between Federal and industry responsibilities.

The new policy recognizes that private industry cannot be expected to do basic energy research or projects of a long term, higher risk character. But there are other circumstances in which it would be unrealistic to expect timely and effective assumption by industry of R&D responsibilities abdicated by the Government, however worthy the projects involved, and despite the provision of new generous tax incentives. Some of these circumstances are discussed below.

Some of the markets on which energy is sold are not "free." Oil and coal are the exceptions. A little over half our primary energy finds its way to consumers through the electric and gas utilities, and the utilities are regulated, price-controlled industries, selling their products not at free market prices, but at controlled prices well below replacement cost. The consequences are that consumers of gas and electricity have less of an incentive to conserve (and therefore to undertake research on conservation) and that producers of electricity are so strapped financially that they cannot afford conventional additions to capacity, let alone demonstration projects or any expensive R&D. Gas producers are faring somewhat better and can look forward to eventual decontrol at the well head, but gas transmission and distribution will remain under control indefinitely and so presumably will the investor-owned electric utilities.

Both these regulated industries have weak incentives to spend on R&D. If successful, the benefits go to rate payers; if unsuccessful, the expenditure may be disallowed as "imprudent." In the case of electricity (but not gas) a substantial amount of R&D has been undertaken by large research-oriented equipment suppliers. And during the past decade the "invention" of a device for financing industry-wide R&D by rate payer levies through EPRI and GRI has enhanced the ability of both industries to respond to R&D needs and provided an alternative to some government-sponsored R&D, but the total annual budgets of the two institutions (less than $300M and $100M respectively) are far too small to permit them even to contemplate financing demonstration or first-of-a-kind commercial plants at a billion or more each.

Some energy related industries are too fragmented to organize and finance a strong R&D response to market signals. Individual units lack the financial strength, and realize too well that the benefits would accrue mainly to other units. Before the advent of agribusiness, the tremendous gains in agricultural productivity resulted from government and government-supported university research and an extension network to convey the results of the research to individual farmers. The building industry, to take an important example, is now similarly fragmented and similarly incapable of organizing and funding its own research.

Even where some larger units exist, industries with a strong R&D orientation and capability are the exception in America. Most of our industry-sponsored R&D is now highly concentrated in a few industries. The reasons may be historical, institutional, or adventitious. A strong R&D response to price signals requires both motivation and capability. In many cases the capability is simply lacking, and while it can be developed given time, the time required to build a strong research organization is measured in years.

A common reason for no response or inappropriate response by consumers to market signals is ignorance. EPA ratings of the fuel efficiency of automobiles, however faulty, focused attention on the potential savings and gave buyers useful guidance. The effect on the average fuel economy of new cars has been dramatic. In the case of buildings, particularly their heating and cooling, ignorance still reigns supreme. Almost no one knows what is cost effective at different prices, or where to go to get reliable, objective information. Almost no one knows how much reduced ventilation in super insulated buildings is safe or how to reconcile tightness and safety. The retrofit problems are extremely complex, and even the best "house doctors" are only beginning to learn their job. In the meantime we are consuming more energy in heating and cooling residential and commercial buildings than in running our automobiles, and the potential savings are also greater. The government can provide some of the research needed to achieve them.

To conclude: ERAB in its evaluations of programs has taken the new policies and guidelines relative to the Federal role very seriously, but ERAB has made exceptions where there is reasonable certainty that timely and adequate response by industry and commerce is an unrealistic assumption, and that continued Federal research support is therefore still required, at least for a time.*

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*We have not, in this report, responded to the Deputy Secretary's request for advice on the respective roles of industry, university, and national laboratory R&D efforts. This will be a major focus of our new study on DOE laboratories, initiated on November 3, 1981.

C. Methods and Criteria

This assessment features an evaluation technique in which each member of ERAB evaluated 49 program areas covering all DOE energy R&D programs in terms of seven criteria for energy supply and conservation programs and five criteria for science and technology base programs. Each member evaluated the relative importance of these criteria and judged whether more, less, or the same amounts of money relative to the President's request for FY 1982 should be allocated to the various programs. The judgments of the Panel members were combined numerically to arrive at figures of merit for each program on the relative priorities of energy technologies and whether financial allocations to each program should be increased, held the same, or decreased relative to the President's request for FY 1982. The resulting figure of merit was used to rank the programs in order of importance.

Criteria used in evaluating the priority of each technology were selected and the definitions for each criterion agreed upon. The criteria for the R&D programs were technology potential, urgency, economic potential, benefit/cost, energy/national security, health/safety/environment, and federal RD&D role. The criteria for the Science and Technology Base programs were scientific potential, risk/benefit, mission impact, urgency and federal role. A more detailed definition of these criteria is given in Appendix C.

Each member of ERAB determined the relative importance of each criterion and then judged its importance for each technology. From this information normalized weighting factors for the criteria were determined. Using these factors and the criteria/technology judgement information, figures of merit were calculated for each technology. Recommended funding levels for each technology were also provided by ERAB members. This information was used as the basis for discussing recommendations of future funding -- namely, whether the funding for each program should be decreased, remain the same or be increased relative to the President's FY82 budget request.

The results of this method allowed for a systematic, well structured debate on issues where the level of agreement was not clear or where clear disagreement was obvious. It was also quite effective in identifying areas of strong agreement by ERAB on a particular value judgment. It is important to note that the assessment or evaluation methodology which used decision questionnaires from each member was not intended to and did not "fix" the results of the final priority ratings. Rather the methodology was designed as an initial point of departure for discussion from which final conclusions would ultimately evolve -- conclusions that were not necessarily consistent with the initial ratings. Where reasonable consensus could not be reached, the expression of minority views is included.

III. ENERGY PROSPECTS

A. Supply and Demand Projections

Table III-A shows the latest DOE projections* of U.S. energy consumption for 1990 and 2000 compared with actual consumption for 1980. Table III-B shows similar projections for U.S. energy production and net imports.

The most striking aspect of recent supply/demand projections has been the sharp drop, especially over the last two years, in the projections for total consumption of energy in the years 1990 and 2000. Figure III-1 illustrates the point. What lies behind this development are (1) a much stronger user response to rising energy prices than had been expected; i.e., greatly and steadily increasing efficiency in the use of energy, which has been expressed as a less than proportionate increase in energy consumption associated with a given increase in GDP, gross domestic product, (see Figure III-2), and (2) a substantial reduction in the expected rate of economic growth. This double-barreled assault on earlier projections has now reduced them to the equivalent of an annual growth between now and the year 2000 of about 1 Q/yr (equal to 0.5 MBD of oil, or 40-50 million tons of coal per year, or a trillion cubic feet of natural gas per year).

A second characteristic of energy consumption and production projections is that there remains a sizeable band of uncertainty. This is especially disconcerting where imported oil -- the country's Achilles heel -- is concerned. Imported oil is the principal balancing factor, and thus carries the combined impact of uncertainties in all other source projections. For this reason there is wide divergence in estimates of U.S. oil imports ten or twenty years from now. Table III-B shows a range from 4 to 15 Q/yr (2 to 7.5 MBD) in 1990 and from zero to 11 Q/yr (5.5 MBD) in 2000. There are estimates outside this range.

With few exceptions, current projections expect the completion of most nuclear plants now on the books, though opinions differ as to time of completion during the next two decades. Even if new orders are placed, this will barely, if at all, affect the number on stream for the balance of the century.

Expectations for coal- or shale-based gases and liquids are modest, with many observers judging the projection of the Synfuels Act of 4.2 Q/yr (2 MBD) in 1992 to be substantially unrealistic. Projections of solar energy (narrowly defined to exclude hydropower, biomass, etc.) are

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*National Energy Policy Plan, USDOE, July 1981, DOE/PE-0029.

TABLE III-A

U.S. ENERGY CONSUMPTION
(Quadrillion Btu Per Year)

	ACTUAL	PROJECTED				% CHANGE
	1980	1990		2000		1980-2000
		MIDRANGE	RANGE	MIDRANGE	RANGE	
Direct Oil[1]	31.2	27	26-29	24	23-25	-23.0
Direct Gas[2]	16.7	18	17.5-18.5	20	18-22	19.8
Direct Coal	3.5	5.5	5.0-6.4	7.5	6.6-8.2	114
Direct Renewable[3]	1.8	2.7	2.6-2.8	4.2	3.9-4.5	133
Electricity	7.1	9.6	8.5-11	12	10-14	69
End-Use Consumption	60.3	63	59-67	68	62-74	
Conversion Losses*	17.7	24	21-27	32	28-36	
Total Consumption[4]	78.0	87	80-94	100	90-110	

1/ Includes coal liquids.

2/ Includes synthetic gas from naptha and coal.

3/ Not included in conventional accounting.

4/ Range results from varying GNP assumptions.

*Includes conversion losses in generation and distribution of electricity and in production of synthetic fuels from coal and oil shale, but not similar conversion losses associated with other forms of energy, e.g. losses in petroleum refining and gas transmission.

Source: *National Energy Policy Plan*, USDOE, July 1981.

TABLE III-B

U.S. ENERGY PRODUCTION AND IMPORTS[1]
(Quadrillion Btu Per Year)

	ACTUAL	PROJECTED			
	1980	1990		2000	
		MIDRANGE	RANGE	MIDRANGE	RANGE
DOMESTIC PRODUCTION					
Oil and NGL	20.5	18	16-21	20.0	17-24
Conventional	20.5	16.4	14.7-19.1	13.7	11.1-18.1
Unconventional[2]	--	1.7	1.0-3.0	6.1	4.2-8.5
Natural Gas	19.8	18.5	16-21	18.0	14-21
Conventional	19.8	17.4	14.6-19.7	14.7	11.4-18.2
Unconventional[3]	--	1.3	1.0-1.6	3.3	2.0-5.1
Coal[4]	18.9	27	24-30	42	37-45
Nuclear	2.7	7.6	6.7-8.7	10.6	7.4-14.0
Hydro/Geothermal	3.2	3.6	3.3-3.9	4.3	3.7-4.9
Renewables[5]	1.8	2.8	2.4-3.3	5.4	3.9-7.0
Total Production[6]	66.9	78	68-88	100	83-116
NET IMPORTS					
Oil	13.3	10	4-15	3	0-11
Gas	1.0	2	1-3	2	1-3
Coal	(2.4)	(3.5)	(2.3-4.3)	(5.9)	(3.4-8.4)
Total Consumption[7]	78	87	80-94	100	90-110

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[1] Ranges in production reflect uncertainties about US energy supply.

[2] Includes shale oil and incremental enhanced oil recovery, but excludes coal liquids.

[3] Includes unconventional gas production from tight sands, Devonian shale and geopressurized methane. Does not include synthetic gas.

[4] Includes coal production for synthetics and coal exports.

[5] Includes about 1.8 quads of biomass not currently included in EIA/DOE statistics.

[6] Totals may not add due to rounding.

[7] Includes 0.8 quads of net stock increases in 1980. Range in total energy consumption results from varying GNP assumptions.

Source: National Energy Policy Plan, USDOE, July 1981.

FIGURE III-1

TRENDS IN U.S. ENERGY DEMAND PROJECTIONS FOR THE YEAR 2000

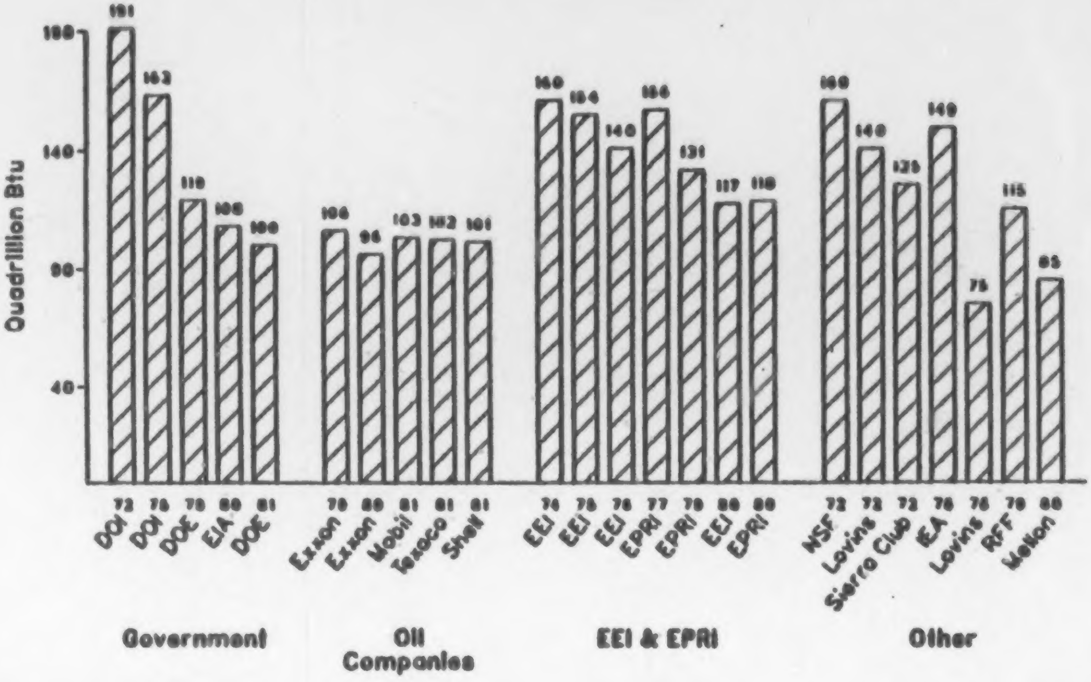
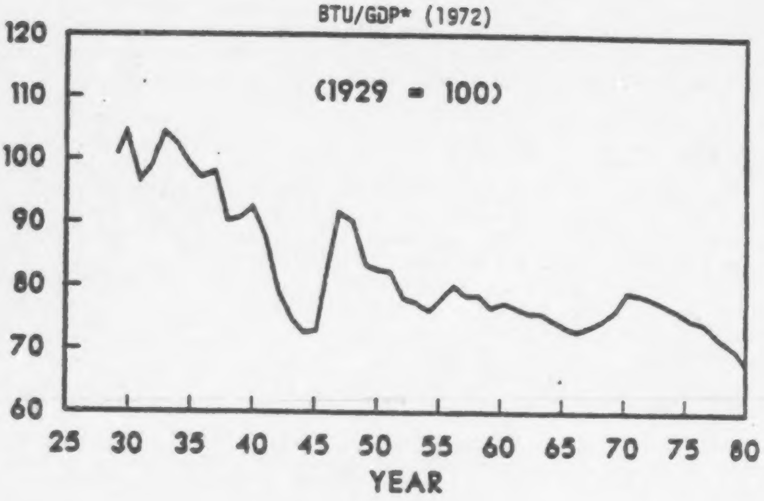


Figure III-2



*GDP represents gross domestic product

Source: Work in Process. Resources for the Future.
Washington, DC: July 1981.

modest, largely connected with the continued depression in the consumer market, the cost of retrofitting and little progress in alleviation of institutional obstacles. Thus, for the next two decades oil, natural gas, and coal with a modest contribution of nuclear and an even more modest one of hydropower will remain the basic components of the U.S. energy supply.

Lest this quick sketch be interpreted as reflecting a mind-set of complacency, we should stress that a large number of assumptions may prove mistaken. These range all the way from the expected continuation of increased efficiency in use (i.e., how soon will that downward slope in the Btu/GNP ratio flatten out?) to the completion, more or less on schedule, of all nuclear plants now being constructed or having construction permits. Finally, a major perturbation in the oil import segment would play havoc with all projections.

B. Energy R&D Budget Analysis

Table III-C (FY1981) and III-D (President's proposals FY 1982) analyze the DOE budget by output energy form (electricity, fuels, and conservation) related to the resource base. Tables III-E and III-F analyze the budget by the same output energy forms related to the timing of impact; near term (next 10 years), mid term (1990-2010) and long term (beyond 2010). These tables are based on a categorization of programs selected by ERAB (see Appendix B-3).

C. Energy R & D Balance and Timing

Initial inspection of the FY 81 and FY 82 Federal energy R&D budgets (Tables III-C and III-D) reveals what appear to be imbalances in the program.

- There is very heavy stress on electrical technology in FY 81, further accented in FY 82, although it is noted that fluid fuels constitute our principal vulnerability.
- Similarly, within electricity, federally-sponsored nuclear programs are receiving a larger proportion of funding than the expected nuclear share of the U.S. energy mix during the next few decades.
- Finally, conservation, a very small fraction of the energy R&D budget in FY 81, is further and drastically reduced in FY 82, although it has so far contributed much more than supply augmentations in reducing our dependence on insecure oil imports.

TABLE III-C

FY 81 Budget as a Function of Technology Area and Energy Form, Millions of $

Output Energy Form Resource Base	Electricity	Fuels	Utilization and Conservation	Science and Technology Base	TOTALS
Conservation	-	-	311.5	-	311.5 (7%)[9%]
Nuclear & Fusion	1793.1 *	-	-	-	1793.1 (39%)[50%]
Coal	66.6	492.4	37.4	-	596.5 (13%)[16%]
Solar	224.3	49.6	363.1	-	637.0 (14%)[18%]
Geothermal	153.6	-	-	-	153.6 (3%)[4%]
Oil/Gas/Shale	-	78.9	-	-	78.9 (2%)[3%]
Science and Technology Base	-	-	-	979.3	979.3 (22%)
TOTALS (% of Total) [% less science and tech base]	2237.6 (49%) [63%]	621.0 (14%) [17%]	712.0 (16%) [20%]	979.3 (21%)	4549.9 [3570.6]

*Centrifuge R&D costs included, construction costs excluded.

[] signify Science & Technology Base funding excluded.

TABLE III-D

President's FY 82 Budget as a Function of Technology Area and Energy Form, Millions of $

Output Energy Form Resource Base	Electricity	Fuels	Utilization and Conservation	Science and Technology Base	TOTALS
Conservation	-	-	126.7	-	126.7 (3%)[5%]
Nuclear & Fusion	2022.2 *	-	-	-	2022.2 (53%)[72%]
Coal	-	282.4	38.8	-	321.2 (8%)[11%]
Solar	66.9	30.5	128.7	-	226.1 (6%)[8%]
Geothermal	46.8	-	-	-	46.8 (1%)[2%]
Oil/Gas/Shale	-	46.5	-	-	46.5 (1%)[2%]
Science and Technology Base	-	-	-	1073.4	1073.4 (28%)
TOTALS (% of Total) [% less science & tech base]	2135.9 (55%) [76%]	359.4 (9%) [13%]	294.2 (8%) [11%]	1073.4 (28%)	3862.9 [2789.5]

*Centrifuge R&D costs included, construction costs excluded.

[] signify Science & Technology Base funding excluded.

The questions whether these apparent imbalances are truly misallocations, or are justified, are addressed in detail in later sections of the report, and ERAB's recommendations for specific allocations within the overall budget are summarized in the conclusions at the end of the report.

No "correct" balance among energy forms and resources can be defined a priori: it would be absurd, for example, to assign coal or natural gas a "fair" share of Federal research dollars if there are no promising research projects in those areas which industry cannot be expected to undertake.

Tables III-E and III-F illustrate the Reagan administration shift toward research with longer range impacts. ERAB does not question this shift as a general proposition as long as it recognizes valid exceptions. Indeed, private industry is not likely to undertake long-range high risk R&D. It is also the area in which energy R&D can expect the highest payoffs and addresses the great national energy objectives -- affordable and environmentally benign sources of electricity and fluid fuels, used efficiently, for the indefinite future.

A summary of the timing impact of the various supply technologies used in preparing Tables III-E and III-F appears in Appendix B.

TABLE III-E*

FY81 Budget as a Function of Energy Form and Timing of Impact, Millions of $

	Near	Mid	Long	TOTALS
Electricity	827.2 **	539.6	870.8	2237.6 (49%)[63%]
Fuels	96.3	482.5	42.0	620.8 (14%) [17%]
Utilization and Conservation	509.2	203.0	-	712.2 (16%)[20%]
Science and Technology Base	-	-	979.3	979.3 (21%)
TOTALS (% of Total) [% less science & tech base]	1432.7 (31%) [40%]	1225.1 (27%) [34%]	[912.8][26%] 1892.1 (42%)	4549.9 [3570.6]

*The timeframe for impact of the various technologies used in making the above table is given in Appendix B.

**Centrifuge R&D costs included, construction costs excluded.

[] signify Science & Technology Base funding excluded.

TABLE III-F*

President's FY82 Budget as a Function of Energy Form and Timing of Impact, Millions of $

	Near	Mid	Long	TOTALS
Electricity	802.1 **	406.1	928.0	2136.2 (55%)[77%]
Fuels	60.7	274.0	24.4	359.1 (9%)[13%]
Utilization and Conservation	174.2	120.0	-	294.2 (8%)[10%]
Science and Technology Base	-	-	1073.4	1073.4 (28%)
TOTALS (% of Total) [% less science & tech base]	1037.0 (27%) [37%]	800.1 (21%) [29%]	[952.4][34%] 2025.8 (52%)	3862.9 [2789.5]

*The timeframe for impact of the various technologies used in making the above table is given in Appendix B.

**Centrifuge R&D costs included, construction costs excluded.

[] signify Science & Technology Base funding excluded.

IV. ELECTRIC-RELATED SUPPLY PROGRAMS

A. Introduction

Electric-related supply programs constitute $2.1B of the FY 82 President's budget in energy supply R&D. Of this, $2.0B is devoted to nuclear fission and fusion R&D. The programs classified under this heading are on average larger in size than those in other R&D categories. This is because programs involving nuclear fission and nuclear fusion necessarily involve large research teams and also frequently involve expensive equipment and facilities for demonstration projects. This applies whether the impact of the program is near term as in research on conventional reactor systems, or long term as in fusion research.

The extent to which these programs should be financed by the Federal Government rather than by private industry is regarded by ERAB members as a key criterion. In many programs the Federal Government has assumed responsibilities (uranium enrichment, nuclear waste disposal and nuclear safety) that are not now assumed by private industry. In other programs (e.g., magnetohydrodynamics, breeder reactors, magnetic fusion) the risk is presently too great and the time scale too long for substantial private industry funding. For such programs the key criteria for continued government funding are the chance of technical success and the ultimate potential for providing a secure energy supply.

A major shift in the Administration's Energy Policy has been to give increased support to assuring the viability of the light water reactor (LWR) electric power industry. In order to carry out this new policy, ERAB recommends that the Administration give high priority to:

- R&D in nuclear waste disposal, particularly in accelerating early demonstration of specific, most promising waste disposal methods
- R&D on current generation LWR's

The summary of ERAB conclusions on priorities and funding for electric related supply is given in Table IV-A.

B. Near Term Nuclear Programs

Conventional reactor systems ($81.5/$68.0)* Increased funding for R&D on conventional reactor systems is recommended. Increased funding should be concentrated in high pay-off areas -- Three-Mile Island analysis, high burn-up fuel, safety related research and lower enriched fuel for research reactors while high temperature gas reactor funding has a lower priority.

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*FY81 funding/FY82 President's Request in million $ are shown in parenthesis.

Nuclear waste programs ($499.8/$617.6) ERAB thinks that the proposed funding for these programs is satisfactory, even though they have the highest priority. Funding increases are not considered necessary because technology is regarded as available; the main obstacles are political. It is recommended that demonstration and site work should be accelerated. Safe waste disposal is critical for assuring the viability of the light water reactor cycle.

Uranium enrichment programs ($142.3/$149.7) There is strong agreement that funding for advanced isotope separation and advanced centrifuge R&D should be continued. It should be noted that $293.3M in FY81 funds and $695.8M in FY82 funds for construction of the near term gas centifuge capacity were excluded from consideration of R&D expenditures as the decision on this project should be based on normal payback criteria. In this regard, the ERAB recommends that consideration be given to formation of a quasi-government or private corporation to handle enrichment on a commercial basis.

Uranium resources assessment ($25.9/$5.8) The President's 1982 Budget for this program represents a substantial reduction from past plans. ERAB recommends that funding be continued at approximately the 1982 budget level so that gathering of readily accessible data and periodic publication of reports can be continued.

C. Long Term Nuclear Programs

Liquid metal fast breeder reactor (base program) and fuel cycle R&D ($419.4/413.9) It is considered desirable to maintain present levels of effort in the LMFBR base program and fuel cycle R&D, except those aspects that are closely tied to near term demonstration should be reviewed for appropriate changes. Breeders with attendant reprocessing could have a high ultimate impact on energy supply security. Although the ultimate impact is post-2000, ERAB recommends that this base technology program must be maintained.

Clinch River Breeder Reactor ($172.0/$254.0) The ERAB believes that the construction of a breeder reactor demonstration at this time is not an urgent priority and thus, under current budget constraints, recommends that such a demonstration be delayed until a future time.*

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*See dissenting opinion and additional remarks in Appendix D.

TABLE IV-A

SUMMARY
R&D PRIORITIES
ELECTRIC SUPPLY PROGRAMS

RANK[1]	PROGRAM	PRIORITY[2]	President's FY82 Budget	ERAB Funding[2] Recommendations
1	Nuclear Waste Commercial (NE)	HIGHER	227.6	Same
2	Nuclear Waste Defense (DP)		390.0	Same
3	Conventional Reactor System (NE)	MEDIUM	68.0	More
4	Breeder Reactor Fuel Cycle R&D (NE)		26.1	Little Less
5	U E - Centrifuge (NE)[3]		64.5	Same
6	Liquid Metal Fast Breeder (NE) (Base Program)		387.8	Same
7	Solar Power Technology (CE)		19.4	Less
8	U E - Advanced Isotope Separation (NE)		85.2	Same
9	Magnetic Fusion (ER)	LOWER	456.1	Little Less
10	Light Water Breeder Reactor (NE)		58.0	Less
11	Uranium Resources Assessment (NE)		5.8	Same
12	Electric Energy & Storage Systems (CE)		47.5	Less
13	Hydropower (CE)		0.0	Zero
14	Clinch River Breeder Reactor (NE)		254.0	Less
15	Geothermal (CE)		46.8	Less
16	Magnetohydrodynamics (FE)		0.0	Zero

[1] Rankings represent consensus view of ERAB and should be interpreted with caution; the differentiation between any two consecutive programs is not necessarily significant.

[2] Priority reflects ERAB view of overall merit of program; funding recommendations relative to the President's budget request for FY82 reflect on Federal role.

[3] Excludes $695.8 million for centrifuge plant construction.

Light water breeder reactor ($60.2/$58.0) This program has the potential of extending the long-term supply of nuclear fuels. The ERAB agrees however that decreased funding for the LWBR may be warranted. The unattractive economics and the lack of industry interest are cited as reasons. Further reductions in funding are recommended.

Magnetic fusion ($391.0/$456.1) ERAB members agree on the long-term importance of this program and that the primary Federal role should be to continue to sponsor a joint program of the federal laboratories, industry and university scientific communities to determine if fusion can be practical.* The potential payoff is very large, but is much too far in the future for significant private sector support. There was agreement that a stretch-out of the program is possible if budgetary pressures demanded it, but maintenance of a substantial level of Federal R&D funding is judged to be essential. It is also recommended that an enhanced effort to examine the use of fusion for the breeding of nuclear fuels deserves consideration.

D. Non-nuclear Electric Programs**

Solar power technology ($112.1/$19.4) This technology area includes wind energy and Ocean Thermal Energy Conversion. (Photovoltaics is included under Solar Applications for Building in the conservation section.) Wind energy is regarded as the most technologically advanced and as having achieved commercial potential. Since there are no critical technical R&D problems preventing commercialization by industry, and since there is limited potential to be realized, the Board recommends less funding for this technology. In the case of OTEC, technical feasibility has been shown on a small scale, thus fulfilling the primary Federal role. The Board recommends that remaining funding should be used to facilitate the transition to industrial commercialization.

Hydropower ($2.4/$0.0) Technical success for small scale hydropower has been proved, and private industry is active (although it is noted that U.S. manufacturers of low-head hydro equipment are absent). Little, if any, R&D is needed; therefore, the Board recommends phase-out of funding. Investment tax and other credits are sufficient to commercialize this technology.

Magnetohydrodynamics ($66.5/$0.0) There are other technologies (such as combined cycle gas turbines) available for increasing the efficiency of large, central power generation stations that do not have the extreme temperature/erosion problems associated with the use of coal in MHD. For this reason the Board foresees little commercial demand for this technology and therefore concurs with the planned phase-out of this program. The Board recommends that existing government facilities be utilized by industry if they wish to pursue research in this area.

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*See Report on the DOE Magnetic Fusion Program, prepared by the Fusion Review Panel of ERAB, August 1980.

**Dispersed electric and co-generation technology, direct coal combustion, and fuel cell programs included in Section VI.

Geothermal ($153.6/$46.8) Strong agreement that funding should be decreased is predicated upon the fact that private industry should be undertaking the development of the part of the resource that appears economic, and is in fact doing so. The program is also seen as having low impact on national energy supply. If a Federal geothermal program is continued, emphasis should be on low temperature process heat and completing the ongoing hot dry rock program, not on geopressured energy resources, where the technical risk appears high or geothermal electric where industry is capable of solving the remaining problems.

Electric Energy and Storage ($109.8/$47.5) This program consists of two parts, R&D on electricity transmission and distribution and R&D on energy storage. R&D on electricity transmission and distribution is regarded as essentially the responsibility of private industry. As a result, there is agreement that the overall program should decrease in such a way that at least some results can be obtained from programs now at the point of yielding valuable data. R&D on energy storage, however, is regarded as important; this part of the program should be strengthened. The Board supports direct participation of Federal electricity producing and marketing agencies in the Electric Power Research Institute as a mechanism for supporting R&D on utility-related needs.

V. FUELS SUPPLY TECHNOLOGY

A. Introduction

Fuel supply technologies represent approximately 9% of the President's total FY 82 budget for energy supply. This sector of energy supply is not as highly regulated as the electric energy industry and has historically developed these supplies with private resources. In general, ERAB concludes that the more urgent technologies, such as enhanced gas and oil recovery, can have an early impact in the market but that the Federal role is significantly less since private industry will develop these sources. Conversely, as discussed in Chapter VII, on the Science and Technology Base, the Federal Government has important roles to play in environmental research on accumulation of CO_2 in the atmosphere and on acid rain. Either of these problems has the potential for substantially limiting expanded use of fossil fuels.

Table V-A provides a summary of the relative priorities and recommended funding levels discussed is this section.

B. Synthetic and Natural Gas

Enhanced Gas Recovery ($30.6/$10.2)* Enhanced gas recovery is given a medium priority with respect to urgency, benefit/cost ratio, supply security and a high priority with respect to technical and economic potential and health and environment. Government funding of the program should be decreased because the private sector is conducting adequate research and development in these areas. Only low level government funding is needed to assist in the funding of some private sector experiments by small companies and to maintain government awareness of what is being accomplished.

Surface Coal Gasification ($69.6/$53.4) Gasification is the most important step in the conversion of coals to synthetic gases and liquids by almost every process and possibly even in the conversion to electricity. While private sector efforts here and abroad are very extensive a continued DOE effort is well justified. Specifically, DOE gasification R&D should concentrate on (a) exploration of new process concepts; (b) R&D on the various auxiliary steps such as evaluation and preparation of gasifier feeds from U.S. coals and raw gas clean-up systems.

Most importantly R&D towards closing the gaps in the knowledge of environmental issues related to gasification is not only important but a most appropriate area for government research.

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*FY81 funding/FY82 President's request in million $ are shown in parenthesis.

TABLE V-A

SUMMARY
R&D PRIORITIES
LIQUIDS AND GAS SUPPLY PROGRAMS

RANK[1]	PROGRAM	PRIORITY[2]	President's FY82 Budget	ERAB Funding[2] Recommendations
1	Enhanced Oil Recovery (FE)	HIGHER	20.1	Less
2	Advanced Research and Environmental Control Technology (FE)	MEDIUM	94.5	Same
3	Enhanced Gas Recovery (FE)		10.2	Less
4	Coal Liquefaction (FE)		105.2	Less
5	Biomass Energy (CE)		20.5	Same
6	Surface Coal Gasification (FE)		53.4	Less
7	Mining R&D (FE)	LOWER	21.0	Less
8	In Situ Oil Shale (FE)		16.3	Less
9	Alcohol Fuels (CE)		10.0	Same
10	In Situ Coal Gasification (FE)		8.3	Less

[1] Rankings represent consensus view of ERAB and should be interpreted with caution; the differentiation between any two consecutive programs is not necessarily significant.

[2] Priority reflects ERAB view of overall merit of program; funding recommendations relative to the President's budget request for FY82 reflect on Federal role.

Since a very broad pilot and demonstration program is under way outside DOE (much of it abroad) the need for continued pilot plant operation is eliminated (example Bi-gas project). R&D elsewhere involves efforts on both air- and oxygen-blown gasifiers, thus a separate DOE program on air-blown (low-BTU) gasifiers appears redundant.

In view of the above, the Board concludes that a funding level somewhat below that proposed in the President's budget would be adequate.

In-Situ Coal Gasification ($10.0/$8.3) In-situ gasification has been attempted here and abroad for many decades but with limited success. One of the more interesting parts of this DOE program aims at gasification of coal in steeply dipping beds. Tests now underway should be completed during the next year. This is a unique application which can be evaluated at the end of the present program; if successful, further development can then be carried on by private sector sponsors with an interest in this type of coal deposit. With this exception, the in-situ coal gasification program has a low probability of a commercially viable success and can be phased out.

C. Petroleum and Synthetic Liquids

Enhanced Oil Recovery ($16.2/$20.1) ERAB gives enhanced oil recovery a very high priority with respect to technological and economic potential, benefit/cost ratio, urgency, supply security and health/environmental problems. However, the Board recommends that Federal funding, even though relatively small, be decreased. A small Federal expenditure can be justified only for some of the environmental research and to keep current with technical developments in the private sector. This recommendation stems from the considerable evidence that the larger energy companies have the ability, the know-how and the willingness to engage in sustained long-term R&D. Also, the oil companies have the financial strength to commercialize enhanced oil recovery processes without government financed demonstrations.

Coal Liquefaction ($277.0/$105.2) Commercially demonstrated coal liquefaction technology is currently available. This is based on the so-called "indirect" route. Large plants are now in operation abroad; a full size plant is under construction in the U.S. that will demonstrate the critical components. Although this plant is designed to produce synthetic natural gas, not liquids, some 4/5 of the total process sequence is identical with that required for liquids, specifically the gasification and gas purification. Improved processes for conversion of the resulting CO/H_2 mixtures to liquids are in the process of commercialization. Although the competitive route to coal based liquids, namely direct hydrogenation, was once considered superior, it has not been practiced for 35 years and now requires an extensive R&D and demonstration program if it is to become competitive. This is desirable to avoid reliance on a single technology. DOE has been engaged in coal hydrogenation for over ten years and has advanced the art to the point where the private sector can evaluate the merit of direct hydrogenation. At the present time, there is no unanimity on any inherent advantage of direct hydrogenation over indirect liquefaction although it should be more thermally efficient in principle.

Outside of DOE activities, the Synthetic Fuels Corporation is even now considering support of several commercial scale liquefaction projects. All of the foregoing has made it possible for DOE to begin phasing out the large scale pilot and demonstration hydrogenation projects that were intended to close the gap between indirect and direct liquefaction of coal. This should be done in a manner protecting the major investments in these projects which include the 200 ton/Day Exxon Donor Solvent Unit, the 250 ton/Day H-Coal Catalytic hydro unit and the 6000 ton/Day Solvent Refined Coal-I (SRC-I) demonstration project; in context with the latter it should be noted that real progress in coal hydrogenation (by any one of its many variants) will ultimately require a large commercial scale demonstration facility to resolve the difficult engineering problems. As a result, completion of the present design phase of SRC-I will serve to highlight the key difficulties on which future R&D should concentrate. It now appears that DOE will remain the key source of future R&D in direct liquefaction (hydrogenation). ERAB supports the continued effort in this area by DOE at the laboratory and small pilot plant scale with particular emphasis toward a broadening of the program to explore a wider range of technologies including 2-stage conversion based on carbonization or extraction with catalytic hydrocracking, new catalyst development, new solid/liquid separation.

DOE's intention to pursue development of improved indirect-liquefaction processes is not considered appropriate by ERAB, given the very extensive effort in the private sector; therefore, ERAB recommends elimination of this part of the liquefaction program.

In summary, ERAB recommends a reduced budget for coal liquefaction focusing on R&D in direct liquefaction area and particularly on R&D to resolve the environmental problems associated with this technology.

In-Situ Oil Shale ($32.2/$16.3) In-Situ Oil Shale is given a medium priority with respect to urgency, technical and economic potential, and benefit/cost ratio. Oil shale is given a high priority with respect to supply security. Since the rich shales will be used first and are concentrated in about a 600 square mile area in Colorado, special attention should be given to the environmental problems that will arise if commercial production rises to the level of one or two million barrels per day. Likewise, the infrastructure needed to support this level of production in such a small area needs study. The government has an important role to play with respect to both the environment and the infrastructure problems; the present funding should be focused on these problems.

The in-situ oil shale program is really only a minor variation of the process for exploiting the oil shale resource. Both subsurface retorting and surface retorting of shale is under active investigation by the private sector. Several companies are designing commercial facilities with the intention of producing oil from shale in the late 80's. There is no need for a government role in the development of the technology of recovery of oil from oil shale; Federal expenditures in this area should be eliminated.

D. Biomass and Solid Fuels

Biomass Energy* ($31.7/$20.5) and Alcohol Fuels ($18.0/$10.0) Both programs are given a high priority with respect to technical potential. Biomass is given a medium priority with respect to all other criteria. Alcohol fuels differ from biomass in that they have a lower priority with respect to economic potential, benefit cost/ratio, supply security and urgency. The Board recommends that these funding levels not be changed. Particular attention should be given to the conversion of lignocellulose to fuels.

Mining R&D ($40.2/$21.0) Coal mining is an area deserving of substantial attention and support of R&D by the Federal Government. Much of this work is conducted by agencies other than DOE.

The Board recommends that coal mining R&D be concentrated in one agency and that DOE/FE instead concentrate its efforts on innovative concepts, particularly for preparation of fine sized coal.

E. Advanced Fossil Energy Research

Advanced Research and Environmental Control Research ($95.8/$94.5)** The Board believes this program should be funded at its present level but with some redirection.

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*Report of the Biomass Panel of the Energy Research Advisory Board, November 1981.

**For FY82 budget request $67.1 for advanced fossil R&D and $27.4 for environmental control technology development.

Advanced Research and Environmental Control Technology R&D (FE) includes, in addition to all exploratory R&D on coal conversion, research towards substitution of coal for oil and gas in direct combustion; this is an extremely important program since the vast majority of coal must be used as boiler fuel over the next several decades, both in existing and new units. Equally important is the development of improved emission control technology to reduce SO_x, NO_x and particulates in fluegas. The Board therefore urges that these parts of the Advanced Research and Environmental Control Programs be increased and given higher priority at the expense of other activities in this program. The remainder of the program is designed to provide technology base support to other fossil energy programs in such areas as materials, diagnostics, instrumentation, and applied research on new concepts and processes. This work is also important, but is longer range and should be closely coordinated with other technology base efforts.

VI. UTILIZATION AND CONSERVATION TECHNOLOGY

A. Introduction

Utilization and conservation technologies represent approximately 8% of the total FY 82 budget for energy research and development (see Tables III-C) divided 4% for utilization and 4% for conservation. The President's budget itself reflects severe budget cuts for these areas, up to 80% reductions over FY 81 in some cases.

Relative to their potential contributions to the solution of the near- and medium-term energy problems, there is an imbalance in the allocation of R&D funds between the conservation programs and those directed at supply. The budget needs a reordering of priorities to reflect better the opportunities that exist for efficiency improvements and the unique Federal role in conservation R&D.

ERAB's views on this point are reflected in the high priorities that members gave to conservation R&D: in the Board's ranking, three of the top five programs (and five of the top ten programs) of the entire Department's R&D projects were drawn from conservation/end-use R&D.

The priorities assigned to conservation and end use programs are summarized in Table VI-A.

B. Conservation Programs

Buildings and Community Systems ($53.0/$28.0)* ERAB ranked research on Buildings and Community Systems in the high priority range. Recognizing its importance to the energy problem as a whole and to the oil import problem particularly, the Board noted that private sector R&D in this area is rare because of the fragmented and undercapitalized nature of the industries involved. The efficiency improvements that can be made in existing structures are large, and no R&D capability exists within the remodeling or retrofit private sector. A Federal role is highly appropriate in this field; indeed, Federally-supported work at several of the National Laboratories, university centers, and elsewhere has been productive in product and design innovation and in transferring research results into the field quickly. The same is true of the consumer products work undertaken by these groups.

ERAB recommends that funding levels in this area be increased, emphasizing R&D that the private sector is not funding, while maintaining active R&D and technology transfer programs involving industry.

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*FY81 funding/FY82 President's request in million $ in parenthesis.

TABLE VI-A

SUMMARY
R&D PRIORITIES
CONSERVATION AND UTILIZATION

RANK[1]	PROGRAM	PRIORITY[2]	President's FY82 Budget	ERAB Funding[2] Recommendations
1	Coal Combustion Systems	HIGHER	38.8	Same
2	Buildings and Community Systems		28.0	More
3	Industrial Conservation		0.0	More
4	Transportation Conservation	MEDIUM	37.0	Same
5	Solar Applications for Buildings		84.7	Same
6	Heat Engines and Heat Recovery		15.6	Same
7	Multi-Sectors Conservation		17.5	Same
8	Fuel Cells		28.6	Same
9	Solar Applications for Industry	LOWER	44.0	Less

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[1] Rankings represent consensus view of ERAB and should be interpreted with caution; the differentiation between any two consecutive programs is not necessarily significant.

[2] Priority reflects ERAB view of overall merit of program; funding recommendations relative to the President's budget request for FY82 reflect on Federal role.

The Federal Energy Management Program will be one of the subjects of discussion by the Board's Conservation Panel. It is not an R&D program; its shortcomings appear to have little to do with budget levels.

Transportation Conservation ($102.1/$37.0) Transportation Conservation R&D ranks at the top of the medium priority group of R&D programs. ERAB recommends that the funding level remain the same.

R&D emphasis should shift from the automobile to the heavy freight truck sector. The vehicle propulsion technology development program should be transferred to industry in an orderly way; the market, driven by consumer preference and foreign competition, should determine the necessity for and the direction of this R&D, not the Federal government. Likewise, electric and hybrid vehicle R&D should be sharply reduced.* Alternative fuels utilization R&D should continue but with closer cooperation with potential ultimate users. The transportation systems utilization activities deserve firm support. This program includes work that the private sector either will not do on systems improvements or cannot provide candidly.

Multi-Sector Conservation ($25.8/$17.5) The Multi-Sector Conservation program historically has been made up of three elements: the small inventions program, the appropriate technology program, and the Energy Conversion and Utilization Technology (ECUT) program. The President's budget has eliminated the appropriate technology program, but kept portions of the other two activities.

Even though it is required by legislation, the inventions program deserves relatively less emphasis within the Department; money devoted to it could be more productively used in the ECUT program, particularly if that program is restructured along the lines the Board recommends.

ECUT now devotes a major share of its budget to research on understanding combustion phenomenon, heat exchanger technology, chemical processes, and materials. Much of this work has been cooperative with the using industries and appears to be bearing fruit.

ECUT management itself, working with a group of outside reviewers drawn from industry and elsewhere, has recommended that its research be principally directed toward work on chemical and physical processes that have generic applications in improving efficiency. ERAB concurs with augmenting ECUT's activities along these lines, using funds drawn from savings realized from the phasing out of the inventions and the appropriate technology program.

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*See dissenting opinion in Appendix D.

Overall, ERAB recommends that the funding level remain the same, but that virtually all the R&D money be used in a redirected ECUT program.

Industrial Conservation ($67.3/$0.0) Industrial Conservation ranked in the high category when compared with all other DOE R&D programs. ERAB recommends that this program be restored close to FY81 funding levels. Thus, ERAB recommends an increase in the proposed budget.

ERAB expressed concern that, although all industries have incentives to conserve energy, many of them lack the ability to conduct R&D either because of their fragmented industrial structure or because of historic failure to support research. This appears to be true of many small and medium sized businesses that, in the aggregate, consume large amounts of energy. Short-term, high-payoff R&D will not be conducted unless Federal leadership is given.

ERAB noted that many of the industrial conservation projects previously undertaken by DOE have been highly effective and have included cost recovery features for the Government. Continuity and continued skilled management are important features in the prior (and future) success of this R&D component.

C. Solar Programs

Solar Applications for Buildings ($224.9/$84.7) The Solar Applications for Buildings program was given a high priority within the medium range. ERAB believes the funding should remain the same, recognizing that the lower funding levels will stretch out the time frame for achieving lower cost photovoltaic electricity.

Photovoltaic (PV) R&D has approximately 75% of the budget in this program. PV and fusion are the major renewable options available for electricity generation if the CO_2 problem is found to be significant. Major cost reductions in PV have been achieved, and further reductions leading to an attractive economic potential appear highly likely if Federal funding is maintained. A separate report recently submitted to ERAB by the Solar Photovoltaic Advisory Committee of the Board provides detailed recommendations in this area. A halving of the budget for PV (as the President has recommended) will mean that development of low-cost PV will slow down, increasing the opportunities for foreign manufacturers to dominate the technology. Therefore, continued support of PV is important to maintain the momentum developed by this program. Emphasis should be placed on advancing those photovoltaic technologies required to achieve cost reductions in both module and cell areas as well as balance of system areas. Premature demonstration activities should be curtailed.

Continued Federal support for basic and applied research in passive solar technology will pay high dividends. The building industry is fragmented and has no institutions capable of supporting this R&D activity. R&D activity on active, building-by-building solar heating should be relinquished to private industry. Research on passive solar cooling deserves support, particularly cooling systems that are effective in humid sections of the country. Similarly, solar pond technology should be continued since it is highly promising.

Solar Thermal Applications for Industry ($138.3/$44.0) ERAB recommends reduced overall funding with increased emphasis on selected elements within this medium priority program. High temperature collectors (concentrators and receivers) deserve increased support because of their great versatility in application and the lack of industrial R&D. Dish technology development should remain at the module level until technical and economic feasibility has been attained with several different modules.

Areas to be considered for reduced Federal support include those technologies where significant industrial interest is expressed already, specifically development in heliostat and external steam receivers, operation of Solar One and Shenandoah, and technology for process heat applications.

D. Other End-Use Technologies

Direct Coal Combustion Systems ($37.4/$38.8) No other direct combustion alternative exists that eliminates the need for scrubbers and is close to commercialization. Hence, ERAB recommends that the direct coal combustion systems program be continued with the same level of funding, although some redirection of emphasis is appropriate.

Atmospheric fluidized bed combusters for industrial applications are ready to move into the commercial market in configurations supported by the Federal Government in the past; further funding is no longer needed and should support instead advanced combustors that appear capable of burning with lower SO_x and NO_x emissions.

Research on pressurized fluidized bed combustors for utility and industrial applications is longer term with a promise of providing multifuel capabilities in, for example, cogeneration applications. In addition, advanced combustion concepts and alternative fuel utilization research may provide environmental or fuel substitution advantages.

Fuel Cells ($32.0/$28.6) Fuel cells represent an undeveloped technology with important environmental advantages. Although both the electric and gas industries are supporting research, some Federal support is essential for its continuation. ERAB recommends no change in the level of funding.

During FY 82, the phosphoric acid fuel cell technology will be tested in a 4.8 MW plant under construction in New York City; extension of the program should be assured to include testing of coal-derived fuel (methanol) and possibly shale liquids. The solid oxide fuel cell, while beyond the proof-of-principle stage, still requires subsystem development. In addition, the molten carbonate fuel cell with its high susceptibility to sulphur catalyst contamination and other high risk advanced technologies deserve continued support.

Heat Engines and Heat Recovery ($31.5/$15.6) ERAB recommends no change in funding for the heat engine program, but some redirection of effort is needed. The coal fueled diesel engine has little chance of economic success; its funding should be shifted to development of high temperature gas turbines. Since high risk technology for high efficiency central and dispersed power systems is the goal of this program, a major effort directed at higher efficiency/higher temperature gas turbines, the sine qua non for an efficient combined cycle, coal-fired power system, is more appropriate.

The heat recovery program supported with carry-over funds from FY 81 should be continued with additional funding requested for continuation of uranium enrichment plant heat recovery projects in FY 83.

VII. SCIENCE AND TECHNOLOGY BASE

A. Introduction

It has long been agreed that the Federal Government must play a primary role in the maintenance of research programs that contribute to new understanding and to expansion of the U.S. technology base. Generally, the activities sponsored by the DOE for this purpose represent an appropriate set of programs for maintaining and expanding the energy technology base, the body of knowledge and know-how upon which the nation must rely for implementation of our overall objectives in the energy field.

The program elements in DOE that constitute the science and technology base fall largely into two categories: general science and energy supporting research. It is the assessment of the Energy Research Advisory Board that both components are appropriate, represent research of high quality and scientific potential and, with minor exceptions, especially in basic and biological energy sciences, that the President's proposed budget for FY 82 calls for an adequate allocation of funds for these programs or allows for adjustments and reallocations that can assure continued progress towards the Nation's goals under the overall constrained budgetary circumstances.

Table VII-A summarizes the relative priorities and funding recommendations. It should again be noted that a separate set of criteria were used to evaluate these programs; thus, the rankings are not directly comparable with the R&D programs discussed in prior sections of this report.

B. General Science

These programs in General Science support the Nation's effort in high energy physics, nuclear physics, general life sciences, nuclear medicine, and the preparation of certain radioactive and heavy isotopes for scientific and commercial uses in a myriad of endeavors. Historically and by interagency agreement, DOE is the lead agency for these national programs that are of long-range importance in the energy effort but, in addition, have broader significance for continued progress in many commercial developments, in space, in defense, and in health-related fields. These basic research programs are sometimes characterized as a "national trust." ERAB proposes no change in these missions and no modification in present budgetary projections for them.

TABLE VII-A

SUMMARY
R&D PRIORITIES
SCIENCE AND TECHNOLOGY BASE

RANK[1]	PROGRAM	PRIORITY[2]	President's FY82 Budget	ERAB Funding[2] Recommendations
1	Materials Sciences	HIGHER	112.1	More
2	Climate and CO_2 Research		16.7[3]	More
3	Chemical Sciences		73.9	More
4	Biological & Environmental Research		153.8[3]	More
5	Biological Energy Sciences		9.4	More
6	Nuclear Medicine		50.5	Same
7	High Energy Physics		392.7	Same
8	University Research		10.6	More
9	Environment and Safety		49.6	Same
10	Engineering, Math & Geosciences		32.3	Same
11	Nuclear Physics		122.9	Same
12	Nuclear Sciences	MEDIUM	37.7	Same
13	Advanced Energy Projects		8.2	Same
14	Technology Assessments	LOWER	3.0	Same

[1] Rankings represent consensus view of ERAB and should be interpreted with caution; the differentiation between any two consecutive programs is not necessarily significant.

[2] Priority reflects ERAB view of overall merit of program; funding recommendations relative to the President's budget request for FY82 reflect on Federal role.

[3] The Biological and Environmental Research Program includes Climate and CO_2 Research with a total budget of $170.5 M.

High Energy Physics ($348.2/$392.7)* This program is the Nation's principal effort to explore the fundamental components and interactions of matter. It depends upon unique, large scale, high cost experimental facilities that are used by laboratory and university scientists to probe ever deeper into the structure of matter and the universe. Support of such research is a Federal responsibility since it is not expected to have commercial significance, although many commercial applications have arisen from technology developed through this program. Some university scientists who work at DOE facilities are supported by NSF; a joint planning process is used to ensure coordination. Support at about the present level will continue a longstanding U.S. commitment toward excellence in this field of science.

Nuclear Physics ($109.2/$122.9) The Nuclear Physics Program addresses the fundamental interactions and structure of the atomic nucleus. It develops and uses unique large-scale facilities at national laboratories and universities with a particular emphasis on heavy ion research and meson interactions with matter. Such research is long-range and would not be carried out without Federal support. Joint planning with NSF, the only other sponsor in this field, is intended to provide a balanced national effort. Support should be continued at about the same level-of-effort.

General Life Sciences and Nuclear Medicine ($45.9/$50.5) This combination of long-term biological research and unique medical application of nuclear techniques is clearly of value to the public and is unlikely to be undertaken by private industry. The genetic and cellular research provides a fundamental scientific underpinning for the more applied Biological and Environmental Research program while the nuclear medicine component exploits unique DOE facilities for the production, testing and application of radioisotopes. The current level-of-effort seems appropriate.

C. Energy Supporting Research

The Energy Supporting Research Programs of DOE are intended to expand the nation's technological alternatives by explorations in chemistry, materials science, biology, engineering and mathematics, geosciences and environmentally-related fields of health. Particularly important is the Climate and CO_2 research program since CO_2 accumulation may prove to be a "show-stopper" in terms of expanded fossil (but not biomass) energy alternatives. Additionally, the problem of acid rain is suggested as an important new area for emphasis by DOE.

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*FY81 funding/FY82 President's request in million $ are shown in parenthesis.

Materials Sciences ($95.2/$112.1) This program includes long-range research in solid state physics, materials chemistry, metallurgy and ceramics that is intended to provide a knowledge base that will lead to improved economics and performance of energy systems. Materials problems plague many energy production and conversion systems; a strengthening of this program would be a sound long-term investment since it addresses such important generic areas as high temperature alloys, corrosion, radiation damage and the physics and chemistry of surfaces. Increased operating costs of major facilities (such as neutron sources) has squeezed this program in recent years. Increased funding is recommended.

Climate and CO_2 Research ($12.9/$16.7*) ERAB members are in strong agreement on the importance of this program due to its long-term significance for public policy toward the use of fossil fuels. Although the predicted effects of increased CO_2 in the atmosphere occur well in the future, an intensified research effort is needed now in order to ensure that better information will be available for future decision making. The Federal Government clearly has the principal responsibility for research in this area; an increased effort is recommended.

Chemical Sciences ($69.0/$73.9) ERAB members are in general agreement that this program should be increased. The research supported is long-range and fundamental and addresses processes, interactions, and chemical transformations in liquids, gases and plasmas. Potential applications include developments ranging from new chemical catalysts for coal liquefaction to improved knowledge of combustion in automotive engines. Increased support in this area has recently been recommended by a detailed study of the Committee on Chemical Sciences of the National Research Council; ERAB concurs with that view.

Biological Energy Research ($7.7/$9.4) This program is designed to investigate the fundamental processes underlying plant biomass productivity and conversion of biomass to other materials for use as fuels or chemicals. ERAB members were generally in agreement that this program should be increased due to the long-term potential contribution from biomass and the small size of the present effort.

University Research ($11.8/$10.6) This program is primarily oriented toward improving the quality and quantity of scientific personnel in energy-related areas. This is clearly an area appropriate for Federal concern; an expanded program is recommended due to the modest level of the present effort.

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*Funded under Biological and Environmental Research. Excluded from Basic Energy Sciences budget.

Engineering, Math and Geosciences ($25.9/$32.3) Each of these areas of science, engineering, and mathematics is pertinent to energy and should be addressed by DOE programs. For example, the programs of the Atomic Energy Commission (AEC) were the first of the high technologies to rely effectively on computer modeling. For this reason, the AEC and its successor agencies, including DOE, have been the leading government agencies in supporting R&D in these areas. The DOE support should be targeted carefully toward those topics that are most obviously relevant to energy and correspond to scientific information needed by other DOE programs. In view of the importance of this effort, the present overall program is minimal.

Nuclear Sciences ($33.7/$37.9) This program includes research in low energy nuclear physics, actinide element chemistry and compilation of nuclear data relevant to the needs of the fission and fusion programs. It also supports the production, using unique federally funded facilities, and distribution of isotopes for medical and industrial use. The present funding level should suffice.

Advanced Energy Projects ($6.7/$8.2) This program identifies and tests the scientific feasibility of novel energy concepts. Particular attention is paid to proposed approaches that do not fit neatly in the scope of other DOE programs with the expectation that concepts that prove scientifically feasible and appear economically promising will be subsequently developed by other DOE programs or by private industry. In the view of ERAB, this program provides a worthwhile safety valve to ensure that promising ideas will not be ignored. The program should not be allowed to grow unduly at the expense of the higher priorities that have been identified, but should remain at about present funding levels.

Technical Assessment Projects ($9.5/$3.0) This program provides support for independent, objective analyses of R&D programs and needs and contributes to the overall planning effort of the Department. Present funding levels seem sufficient; expansion in this area is not needed.

D. Environmental Research

Biological and Environmental Research ($168.4/$170.5) This program investigates the potential human health and environmental impacts of new energy technology. It involves identifying the substances produced by energy systems, including such phenomena as acid rain; tracing their movement through air, water and land; and assessing their effects on humans and other living systems. Such research is clearly a Federal responsibility. It could not and should not be entrusted to private industry due not only to the long-term generic character of the work but also to the need for credibility and comprehensiveness. Certain unique long-baseline programs in ecology and radiation effects can only be carried out under Federal auspicies. This program has been about level or reduced in recent years; an increase in funding is warranted.

ERAB recommends a change in program emphasis with a major, urgent concentration of effort to resolve the acid rain problem. The ability to increase the use of coal, particularly the high sulfur coals in the Eastern U.S., depends on a far better understanding of the causes as well as the impacts of acid rain. The information currently available raises as many questions as it seems to answer regarding the relation of coal-based emissions to the occurrence of acid rain. Thus, a major effort by DOE is in order to assure that future increased use of coal remains an acceptable option.

Environment and Safety ($48.5/$49.6) This program is designed to assess information concerning the environmental impacts of energy development, the safety impacts of various technologies, and the health and safety aspects of DOE and contractor facilities. Clearly, DOE must be concerned with the safety both of energy systems and of the facilities for which it is responsible.

E. Federal Role and the Energy Technology Base

The distribution of performer efforts for the DOE technology base program (government laboratories, universities, or industry) deserves reexamination and both ERAB and DOE have embarked upon studies that will culminate in recommendations on this score within a few months.

The high Federal role in these efforts is worthy of emphasis if the Nation's long-run energy needs are to be met. Industry conducts and will continue to conduct basic and applied research to serve its short-term economic needs, but interim economic incentives will always result in disjointed efforts from the national perspective. Only the Federal Government can assure a balanced approach for the longer run. The DOE research program also contributes to the technology base relevant to other national missions since advances in underlying knowledge can be widely applicable.

Finally, the reluctance of Congress, until now, to appropriate funds for the support of economic and social science studies relevant to energy demand usage and conservation has resulted in an incomplete DOE program for its technology base. ERAB again endorses the authorization and implementation of such programs in DOE.

VIII. CONCLUSIONS AND RECOMMENDATIONS CONCERNING ENERGY R & D PRIORITIES

A. Overall R & D Program Priorities

Table VIII-A summarizes the results of the Board's evaluations of the four major energy R&D sectors: Electric supply, liquid and gas supply, conservation and utilization, and technology base. There are a number of electric-supply-related R&D programs that, for a variety of reasons, are of low priority and whose funding should either be substantially reduced or terminated. This reflects, in part, the Board's view that although no "correct balance among energy forms and resources can be defined *a priori*," R&D for electric supply technology is receiving a larger proportion of funding than the present and projected share of electricity in our national energy supplies.

The Board concluded that the overall Federal funding level in the liquid and gas R&D supply was higher than needed. This view results from the belief that the oil and gas industries are in a good position to take advantage of energy R&D opportunities and that the Federal Government role should be primarily focused on longer-term, higher-risk, applied research and development. It should not directly support costly demonstrations or large pilot plant projects (except as funded by loan or price guarantees through DOE and later under the Synthetic Fuels Corporation). However, great care should be taken in phasing out existing Federal R&D programs to insure technology transfer to the private sector.

In the conservation and end-use utilization area, the Board concluded that funding should be increased. The Board recognizes that higher energy prices have resulted in substantial reductions in energy demand and that this process is likely to continue. However, private enterprise in the buildings sector and, to a large degree, in the industrial sector is unlikely to do all the R&D needed. The Board believes that funds allocated to R&D in these two sectors should be increased. Such increases, combined with other ERAB recommendations, would increase the total allocation to the utilization and conservation technologies.

With regard to technology base programs, it was the Board's view that the funding for such programs should not be decreased and in certain areas should be increased. This stems from the Board's belief that, of all the sectors for energy R&D funding, the technology base programs are less likely to attract industry support; therefore, the Federal Government's role is greatest. Continued and increased support in the technology base programs offers the best chance for substantial technological break-throughs and improvements.

TABLE VIII-A

RELATIVE PROGRAM RANKING

	Electric Supply		Fuel Supply		Conservation & Utilization		Science and Technology Base[1]	
Priority	Program	Funding	Program	Funding	Programs	Funding	Programs	Funding
HIGHER							Materials Sciences	More
							Climate & CO_2 Research	More
							Chemical Sciences	More
	Commercial Nuclear Waste	Same					Biol/Environmental Research	More
							Biological Energy Sciences	More
					Coal Combustion	Same	Nuclear Medicine	Same
	Defense Nuclear Waste	Same			Buildings/Community Systems	More	High Energy Physics	Same
					Industrial Conservation	More	University Research	More
			Enhanced Oil Recovery	Less				
							Environment & Safety	Same
							Engineering/Math/Geosciences	Same
							Nuclear Physics	Same
MEDIUM	Conventional Reactors	More	Advanced Technology	Same	Transportation Conservation	Same		
			Enhanced Gas Recovery	Less	Solar Applications/Bldgs	Same		
	Breeder Fuel Cycle R&D	Little Less					Nuclear Sciences	Same
	Centrifuge	Same						
	LMFBR	Same			Heat Engines/Heat Recovery	Same		
			Coal Liquefaction	Less			Advanced Energy Projects	Same
	Solar Power Technology	Less			Multi-Sectors Conservation	Same		
	Advanced Isotope Separation	Same			Fuel Cells	Same		
			Biomass Energy	Same				
			Surface Coal Gasification	Less				
LOWER			Mining R&D	Less	Solar Applications/Industry	Less		
	Magnetic Fusion	Little Less	In-Situ Oil Shale	Less			Technology Assessments	Same
	Light Water Breeder	Less						
	Uranium Resource	Same						
	Electric Energy/Storage	Less						
	Hydropower	Zero						
	Clinch River Breeder	Less						
	Geothermal	Less						
			Alcohol Fuels	Same				
			In-Situ Coal Gasification	Less				
	Magnetohydrodynamics	Zero						

[1] Science and technology base programs were evaluated by a different set of criteria from the RD&D programs and are not directly comparable to them.

The remainder of this Chapter summarizes the conclusions and recommendations* of the Board in each of the Energy R&D program areas.

B. Electric Supply R&D Programs

With regard to Electric Supply R&D Programs, the major conclusions of the Board are as follows:

1. Continued emphasis is needed to complete the development and commercialization of light water nuclear power reactors in the U.S. A commitment has been made by this Administration to nuclear power. It has a significant role in the nation's energy mix; continued Federal support at this time is necessary. Hence, the Board recommends that continued funding be given to conventional reactor systems and safety, waste disposal programs (particularly accelerated demonstration), and uranium enrichment.

2. With respect to the liquid metal breeder reactor, research and development should be continued in order to maintain the capability for demonstrating breeder technology in the future. However, construction of a demonstration plant in the early 1980s is not an urgent national priority. Sufficient coal and uranium supplies exist to satisfy projected levels of electrical demand for at least 40 years and possibly well beyond. For these reasons, the panel recommends continued research and development on the liquid metal breeder reactor, as well as other breeder concepts, but that demonstration of breeder technology be delayed until a future time.**

3. With respect to fusion, ERAB members agree on the long-term importance of this program and that the primary Federal role should be to continue to sponsor a joint program of the federal laboratories, industry and university scientific communities to determine if fusion can be practical. The potential payoff is very large, but is much too far in the future for significant private sector support. There was agreement that a stretch-out of the program is possible if budgetary pressures demanded it, but maintenance of a substantial level of Federal R&D funding is judged to be essential. It is also recommended that an enhanced effort to examine the use of fusion for the breeding of nuclear fuels deserves consideration.

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*All funding recommendations are relative to the President's FY82 budget request.

**See dissenting opinion and additional remarks in Appendix D.

4. Finally, there are several electric programs for which funding should be reduced or eliminated (such as solar power technology, light water breeder reactors, electric transmission systems, geothermal, magnetohydrodynamics, and hydropower) due to their relatively small contribution to electric supplies in comparison with other programs.

C. Liquid and Gas Supply R&D Programs

With regard to Liquid and Gas Supply R&D Programs, the major conclusions of the Board are as follows:

1. With respect to enhanced oil and gas R&D recovery programs, the ERAB concluded that the U.S. oil and gas industry has sufficient resources and financial incentives to develop these technologies without substantial government assistance. The Board concluded that, even though these programs are important from the standpoint of urgency and energy security, the Federal R&D role should be minimal with less Federal funding needed.

2. With regard to coal liquefaction and coal gasification, it was concluded that large-scale demonstration projects involving substantial cost-shared Federal outlays are not necessary or appropriate considering the financial guarantees (e.g., loan guarantees, price guarantees) that are available from DOE and the Synthetic Fuels Corporation. The major Federal effort in synthetic fuels research and development should be directed at innovative concepts at the laboratory and small pilot-plant scale with particular emphasis toward exploring a wider range of technological options with potential for significant efficiency and cost improvements. The Board recommends a reduced budget for DOE's cost-shared projects at the large pilot plant and demonstration-plant scale.

3. With respect to in-situ oil shale recovery, the Board recommends a decrease in funding based on the fact that several major oil companies have in-situ shale projects that do not involve Federal assistance.

4. The funding level for R&D directed at producing liquids and gases from biomass and the production of alcohol is at an appropriate level.*

5. Continuing increases in the price of conventional oil and gas suggest that the time when coal and oil shale will be economic sources of oil may be near at hand. This situation is stimulating the private sector to consider some commercial operations by 1990. ERAB concludes that

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*See ERAB reports on Biomass and Alcohol Fuels.

the private sector can be expected to carry out important actions that justify a lessening of DOE research in these technologies. However, it is recommended that DOE accelerate its research in environmental problems and infrastructure problems associated with the commercialization of these technologies.

6. The bulk of the coal produced for the next several decades will be used directly as boiler fuel, both in existing and new units, reducing dependence on oil and gas for this purpose. But improved emission control technologies to reduce SO_x, NO_x and particulate emission in flue gases will be essential to the success of this effort. ERAB therefore urges that this part of the Advanced Research and Environmental Control Technology (FE) programs be increased and given higher priority at the expense of the other activities in this program.

D. Conservation and Utilization R&D Programs

With regard to Conservation and Utilization R&D Programs, the major conclusions of the Board are as follows:

1. The overall level of Federal R&D funding for conservation and improved utilization programs is too low in view of their potential for energy improvements and the inability of many important energy-consuming sectors to conduct R&D. Moreover, Department-wide, the balance between supply oriented R&D and conservation R&D is too heavily weighted toward the supply side.

2. The Board concluded that R&D in Buildings and Community Systems needs increased funding in view of the large amount of energy consumed in this sector and the lack of private sector institutions able to undertake building systems R&D. This is particularly true in the case of the important retrofit technologies.

3. R&D in the transportation sector should be redirected away from its present heavy emphasis on automobile engines and toward the heavy freight truck sector. The phase out should include a sharp reduction in work on the electric and hybrid vehicle.* Transportation systems utilization activities deserve support. Overall, funding levels in this area should remain the same.

4. Funding for the Multi-Sector Conservation program should remain the same and should be concentrated on work in the Energy Conversion and Utilization Technology program (ECUT).

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*See dissenting opinion in Appendix D.

5. Funding for the Industrial Conservation programs should be restored to approximately the level in FY81. Many industries have no capacity for private sector R&D and that the close cooperation with users that characterized this program deserves continuation.

6. Solar Applications for Buildings should be redirected slightly to emphasize passive heating and cooling. Solar pond and ice cooling technology should be continued since it is highly promising.

7. Funding for Solar Thermal Applications for Industry deserves slightly lower levels of support with redirection toward high temperature collector and dish technology development.

8. Funding for direct coal combustion systems (a high priority program), fuel cells, and heat engines and heat recovery should remain at the same levels.

E. Science and Technology Base Programs

The Board recommends increased Federal funding in a number of program areas. The Board would give particular emphasis to environmental and health-related research, clearly important from the standpoint of understanding and evaluating the long-term impact of the introduction of new energy technologies. Of particular importance are the CO_2 and acid rain issues. As previously indicated, the panel believes that the science and technology base programs should have a relatively higher Federal priority because of the lower likelihood that industry would provide adequate funds for such basic and applied research.

F. General Conclusions and Recommendations

1. Serious attention must be paid to several related environmental issues. First, development of nuclear waste disposal technologies and control technologies in the Advanced Research and Environmental Control Technology Program are necessary for environmentally sound implementation of present and future technologies. Second, several of the programs in the science and technology base are essential if a proper energy mix is to be employed. These include the acid rain program, the climate CO_2 program, and Health and Environmental Research.

2. Our energy system is a web of machines and people; the current budget is focused on machines. Consideration should be given to research in social areas, to prepare for rapid energy development in certain portions of the country and to help transfer conservation technologies for the industrial and residential sectors.

APPENDIX A

Department of Energy
Washington, D.C. 20585

AUG 13 1981

Mr. Louis H. Roddis, Chairman
Energy Research Advisory Board
110 Broad Street
Charleston, S. C. 29401

Dear Lou:

The Department of Energy has invested heavily over the past several years in research and development on a wide range of energy alternatives. DOE now plans to increase emphasis on long-term, high-risk, and potentially high-payoff R&D programs. As such, it is timely to review our R&D priorities and to make some hard choices on which programs to pursue vigorously and which to deemphasize based on a realistic appraisal of both our energy options and energy needs for the foreseeable future. I would appreciate the advice of the Energy Research Advisory Board on these matters and particularly the Board's recommendations on overall Federal energy R&D priorities.

This effort can be based on the Board's broad knowledge of DOE programs and especially on the recent R&D panel activities to review the energy technology base and to develop criteria and methods for assessing priorities. Your terms-of-reference should include review and recommendations on the following concerns:

- The relative merits of each major R&D program with respect to such criteria as the technical and economic potential, urgency and lead time required, benefits and costs of Federal funding, contribution to energy security, health and environmental risks, and the appropriate Federal role;
- The appropriate R&D funding balance between electric power supply, fuels supply, conservation, and technology base program areas;
- The appropriate program orientation and balance between research, development, and demonstration activities;
- The strategic R&D objectives for the near-, mid-, and long-term.

Your thoughts on these matters would be particularly useful by November 16, 1981, to assist the Secretary and myself with our reviews of the DOE Sunset Report and the FY83 budget. However, I regard this as a continuing and important assignment for the Board and would also appreciate your recommendation on the next steps. Specifically, you should consider what efforts both ERAB and the Department should undertake toward improving our overall R&D planning, management, and evaluation processes and decisions. I will personally look forward to your report and hope to meet frequently with you and the Board as the study progresses.

Sincerely,

K

W. Kenneth Davis
Deputy Secretary

APPENDIX A

THE SECRETARY OF ENERGY
WASHINGTON, D.C. 20585

April 30, 1980

Dr. Solomon J. Buchsbaum
Executive Vice President
Customer Systems
Bell Laboratories
Crawford Corner Road
Holmdel, New Jersey 07733

Dear Dr. Buchsbaum:

Research and development to increase the supply, conversion efficiency and conservation of energy is vital to our national interest. I am particularly concerned about the adequacy of the Department's efforts in this area. The Department is presently undertaking a review of the technology base component of our R&D programs under the leadership of the Director of Energy Research with a view toward improving their effectiveness. I would appreciate the participation of ERAB in this process in order to give us the benefit of external views on the adequacy of these programs.

There are some broad concerns that need to be addressed:

- o The adequacy of the research underpinning for technology development programs.
- o Possible gaps or duplications of effort.
- o The balance among research performers (universities, laboratories, industry).
- o Significant R&D opportunities that our programs may be missing.

Obviously, a complete review of this whole area would be a lengthy and complex task and I view this as a continuing effort through which ERAB might help the Department. In the shorter term, an initial review of the technology base in conjunction with the work Ed Frieman already has underway could be helpful in contributing to our final decisions on the FY 1982 budget if it could be completed by the end of the summer. I hope that ERAB can devote a portion of its summer study to this task.

Sincerely,

John C. Sawhill
Deputy Secretary

APPENDIX B: BACKGROUND INFORMATION

CHRONOLOGY OF R&D PANEL MEETINGS[1] APRIL 30, 1980 TO NOVEMBER 5, 1981

1. Planning and Implementation

On April 30, 1980, Deputy Secretary John C. Sawhill requested ERAB to review the R&D programs in the Department. An initial review of the technology base in conjunction with the work the ER Director had underway would be helpful in contributing to the final decision on the FY 82 budget. ERAB approved the terms of reference and established a panel.

On June 7, 1980, the R&D Panel met to formulate questions and issues for Panel consideration, to develop outlines for Panel and Subpanel reports, and to discuss organizational matters. The Panel also approved an agenda for the first full-scale Panel and Subpanel organizational meetings to be held.

2. Technology Base Assessment and Detailed Program Reviews

On July 10, 1980, the Fossil R&D Subpanel met in Washington to receive briefings on fossil energy technology and R&D programs, review DOE's documents on technology base assessment, and discuss preparation of the initial draft input to final R&D Panel report.

On July 10th and 11th, 1980, the Conservation R&D Subpanel met in Washington, was briefed on conservation technology and R&D programs, and held initial discussions on Conservation Subpanel input into ERAB Technology Base Report.

On July 22, 1980, the Nuclear R&D Subpanel met in Washington for a summary of fact-finding briefings on nuclear technology and R&D programs. They discussed eight items pertaining to the technology base assessment of DOE's Nuclear R&D programs.

- Converter Reactor Systems
- Commercial Nuclear Systems
- Advanced Nuclear Systems
- Spent Nuclear Fuel
- Breeder Reactor Systems
- Advanced Isotope Separation Systems
- Nuclear Uranium Assessment
- Gas Centrifuge

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[1] All meetings were open to the public with notice in Federal Register.

On July 23, 1980, the Solar R&D Subpanel met in Washington for briefings on solar technology and R&D programs to review DOE documents on the technology base component of DOE's Solar Energy R&D program and to hold initial discussions on Solar Energy R&D Subpanel input into the ERAB Report.

On July 23, 1980, the Energy Research R&D Subpanel met in Washington for briefings on Basic Energy Sciences and other energy research programs and to review the technology base research support by the Office of Energy Research.

On July 29, 1980, the Environment R&D Subpanel met in Washington for discussions on the status of technology base assessment. Representatives from the research offices within DOE Office of Environment discussed highlights of their programs. Office of Technology Impacts discussed the complexity of doing good assessments stressing the problems of the data collection and management.

On July 29, 1980, the Resource Applications R&D Subpanel met in Washington for briefings on resource application programs to review DOE documents on the technology base component of DOE's Resource Applications R&D Program, and to hold initial discussions on Resource Applications R&D Subpanel's input into ERAB Technology Base Report.

On July 30th and 31st, 1980, the R&D Panel met in Washington for discussions on crosscutting issues and integration problems. Subpanel members discussed status of membership, information needs, plans to complete reports and planned for activities at La Jolla.

3. Interim Report on DOE Technology Base "R&D Needs in DOE"

On August 18th, 1980, the Board met as a whole, then divided into their individual subpanels to complete the initial phase of the study and report to the full ERAB during the course of the meeting.

On August 18th - August 22nd, 1980, the ERAB Summer Study meetings were held to develop an interim report, findings, conclusions and recommendations on the technology base assessment (TBA) study. The following seven (7) subpanels were involved

8/19/80 - R&D Integration Panel - La Jolla
8/19-21/80 - Energy Research R&D Subpanel - La Jolla
8/21/80 - Resource Applications R&D Subpanel - La Jolla
8/19/80 - Solar R&D Subpanel - La Jolla
8/18-20/80 - Environment R&D Subpanel - La Jolla
8/18-20/80 - Nuclear R&D Subpanel - La Jolla
8/19-21/80 - Fossil R&D Subpanel - La Jolla

In addition, ERAB conducted several in-depth technical reviews which were also used as a basis for the R&D priorities study. Specifically, ERAB conducted studies on: (1) Efficient Use of Energy (Conservation); (2) Fossil Energy; (3) Nuclear Energy; (4) Solar Energy; (5) Resource Applications; (6) Environment; and (7) Energy Research.

On August 22, 1980, the ERAB Board in La Jolla received the draft TBA report and approved it subject to incorporation of the members' revisions. The report was subsequently transmitted to the Secretary of Energy as an interim report on 9/5/80 (Research and Development Needs in the Department of Energy).

4. Methodology for Setting R&D Priorities

On December 19, 1980, the R&D Panel met in Washington to discuss a methodology for evaluating energy R&D priorities. Discussions were held on alternative approaches to implementing R&D Priorities Study proposed in Bill McCormick's "White Paper," suggesting the R&D needs exercise should be expanded to set overall priorities and trade-offs between R&D program areas based on consistent criteria.

On January 26, 1981, the R&D Panel met in Cleveland to dicuss the methodology for evaluating energy R&D priorities. Discussions were held to reveiw methodology for ranking priorities and structure of Panel/Subpanels. Other topics discussed were:

Membership, Technical Support Group
Definition of Criteria
Weight/Value Functions
Input, Value Judgments, and Outputs (by Subpanel)
Technology Lists
Schedule
Report Outlines

5. R&D Priorities and Study Report

At the February 5-6, 1981 ERAB meeting, discussions were held on the recent activities of the R&D Panel and alternate approaches. It was proposed that a number of subpanels could be formed to provide input on energy technologies and one which is to cover technology base and environmental considerations. Several energy product subpanels would then utilize input from the foregoing subpanels. The plan also included possible utilization of the MARKAL computer model developed by BNL.

At the July 9-10, 1981 ERAB meeting, John Foster, Chairman of the Panel, reviewed their past efforts beginning with the Interim Report transmitted to the Department last September, following an extensive effort culminating in the Summer Study meeting in August 1980.

On August 13, 1981, Deputy Secretary Kenneth Davis requested advice of the Energy Research Advisory Board on the R&D priorities and the Board's recommendations on the overall Federal energy R&D priorities.

The Panel was in the process of developing a methodology which would assist in assigning priorities to the nation's energy R&D programs, and would also help to illuminate the appropriate role of the Federal Government in these programs. For the purposes of the R&D priorities study, the R&D Panel would consist of all the members of ERAB with an Executive Committee appointed by the Chairman to include John Foster (Chairman, R&D Panel), William McCormick (Vice Chairman, R&D Panel), Lou Roodis (Chairman of ERAB), and Ivan Bennett (Vice Chairman of ERAB). Whether additional Panel members would be appointed would be decided at a later date; previous subpanels to the R&D Panel were dissolved.

At the September 2-3, 1981 ERAB meeting, the Chairman reported on the progress and current status of the R&D study and noted the August 13 letter request from the Deputy Secretary which sets the framework for it. The Deputy had asked that the report be completed by mid-November. John Foster, R&D Panel Chairman, described in detail the activities of the Panel, the methodology they were applying, and the evaluation forms each member will be asked to complete and return for collation. He urged each member to include any narrative comments along with their program evaluations which would serve to explain any particular rating made by a member and serve as a basis for drafting the report.

A detailed discussion then followed among all ERAB members in an attempt to establish a uniform basis among them all for their responses. These responses were discussed at a special meeting of the Panel on September 24. Preliminary results were sent to members on October 1. ERAB members submitted respective subsection drafts October 15, and a draft of the report was sent to ERAB members by October 30. The final review took place at the ERAB meeting on November 4-5.

On September 24, 1981, the R&D Panel met in Washington to discuss a number of cases in which overall programs were not highly rated, but individual aspects of subprograms of the major program were essential. The Panel concluded that considerations for subprograms of the major programs, particularly those involving subprogram funding recommendations, should be highlighted by discussion in the narrative portion of its report.

The initial results of the prioritization study were discussed at the Energy R&D Panel Meeting held September 24, 1981, in Washington, DC. At that meeting consensus recommendations were reached concerning funding where no consensus had resulted from the raw data evaluation. It was recognized that the final priority ratings would be the result of an evaluating process.

TABLE B-1

ENERGY R,D&D PROGRAM BUDGET SUMMARY

	Congress. Budget Authority FY1981	Pres. Request FY1982	Congress. Budget Authority FY1982
		(in $thousands)*	
A. Electric-Related Supply			
1. Magnetohydrodynamics (FE)	66,533	0	29,000
2. Geothermal (CE)	153,645	46,775	57,775
3. Hydropower (CE)	2,409	0	2,750
4. Electrical Energy Systems and Energy Storage Systems	109,800	47,525	65,625
5. Solar Power Technology (CE)	112,100	19,400	73,800
6. Magnetic Fusion (ER)	391,000	456,100	484,600
7. Uranium Resource Assessment (NE)	25,925	5,800	5,800
8. Uranium Enrichment (NE)			
a-Centrifuges (NE)**	356,315	760,300	691,800
b-Advanced Isotope Separation (NE)	79,300	85,237	85,237
9. Conventional Reactor Systems (NE)	81,500	68,000	101,750
10. Breeder Reactors (NE)			
a-Liquid Metal Fast Breeder Reactor	371,919	387,842	405,628
b-Clinch River Breeder Reactor	172,000	254,000	228,000
c-Light Water Breeder	60,200	58,000	45,000
d-Fuel Cycle R&D	47,500	26,100	48,100
11. Nuclear Waste			
a-Commercial (BE)	201,415	227,551	208,701
b-Defense (DP)	298,445	390,000	384,800
12. Mining R&D (FE)	40,169	21,000	17,000
Subtotal	2,570,175	2,853,630	2,935,366
B. Liquids and Gas-Related Supply			
13. Advanced Technology (FE)	95,761	94,500	84,500
14. Coal Liquefaction (FE)	276,997	105,200	248,200
15. Surface Coal Gasification (FE)	69,618	53,440	56,300
16. In Situ Coal Gasification (FE)	9,960	8,300	8,300
17. Enhanced Oil Recovery (FE)	16,158	20,100	20,100
18. Enhanced Gas Recovery (FE)	30,598	10,200	14,200
19. In Situ Oil Shale (FE)	32,151	16,250	22,350
20. Biomass Energy (CE)	31,650	20,500	20,500
21. Alcohol Fuels (CE)	18,000	10,000	10,000
Subtotal	580,893	338,490	484,450

* Includes deferrals and rescissions, but excludes program direction.

** Includes $293.3M in FY 81 and $695.8M in FY 82 for construction of gas centrifuge plant.

TABLE B-1 (continued)

	Congress. Budget Authority FY1981	Pres. Request FY1982	Congress. Budget Authority FY1982
	(in $thousands)*		
C. **Conservation & Improved End-Use Utilization**			
22. Coal Combustion Systems (FE)	37,368	38,800	42,800
23. Heat Engines & Heat Recovery (FE)	31,468	15,600	15,600
24. Fuels Cells (FE)	32,012	28,600	35,900
25. Buildings & Community Systems (CE)	52,990	28,000	47,400
26. Industrial Conservation (CE)	67,300	0	29,600
27. Transportation Conservation (CE)	102,120	37,000	59,550
28. Multi-Sector Conservation (CE)	25,800	17,500	19,600
29. Solar Applications for Buildings (CE)	224,900	84,700	118,050
30. Solar Applications for Industry (CE)	138,270	44,000	66,050
Subtotal	712,228	294,200	434,550
D. **Technology Base**			
31. Energy Supporting Research (ER)			
a-Basic Energy Sciences			
aa-Nuclear Sciences	33,700	37,670	37,670
ab-Materials Sciences	95,150	112,060	112,060
ac-Chemical Sciences	69,040	73,940	73,940
ad-Engineering, Math & Geosciences	25,860	32,300	32,300
ae-Advanced Energy Projects	6,650	8,220	8,220
af-Biological Energy Sciences	7,650	9,410	9,410
ag-CO_2 and Climate Research**	12,900	16,700	0
b-Technology Assessments	9,500	3,000	3,000
c-University Research	11,800	10,600	10,600
32. General Science (ER)			
a-High Energy Physics	348,180	392,700	392,700
b-Nuclear Physics	109,200	122,900	122,900
c-Nuclear Medicine	45,900	50,500	50,500
33. Environment & Safety (EP)	48,510	49,600	43,600
34. Biological & Environment Research (ER)**	155,272	153,800	176,500
Subtotal	979,312	1,073,400	1,073,400
TOTAL	4,842,600	4,559,220	4,927,766

*Includes deferrals and rescissions, but excludes program direction.

**The biological and environmental research program includes climate and CO_2 research with a total budget of $168,172 in FY1981 and $170,500 in FY1982.

TABLE B-2

TIME OF EXPECTED IMPACT

PROGRAMS	TIMEFRAME OF IMPACT*		
	Near	Mid	Long
A. Electric-Related Supply			
1. Magnetohydrodynamics (FE)		X	
2. Geothermal (CE)	X		
3. Hydropower (CE)	X		
4. Electrical Energy and Storage Systems (CE)		X	
5. Solar Power Technology (CE)		X	
6. Magnetic Fusion (ER)			X
7. Uranium Resource Assessment (NE)	X		
8. Uranium Enrichment (NE)			
a- Centrifuge (NE)	X		
b- Advanced Isotope Separation (NE)		X	
9. Conventional Reactor Systems (NE)	X		
10. Breeder Reactors (NE)			
a- Liquid Metal Fast Breeder Reactor			X
b- Clinch River Breeder Reactor		X	
c- Light Water Breeder Reactor			X
d- Fuel Cycle (R&D)			X
11. Nuclear Waste			
a- Commercial (NE)	X		
b- Defense (DP)	X		
B. Liquids and Gas-Related Supply			
12. Mining R&D (FE)		X	
13. Advanced Research Tech. Development (FE)		X	
14. Coal Liquefaction (FE)		X	
15. Surface Coal Gasification (FE)		X	
16. In Situ Coal Gasification (FE)			X
17. Enhanced Oil Recovery (FE)	X		
18. Enhanced Gas Recovery (FE)	X		
19. In Situ Oil Shale (FE)			X
20. Biomass Energy (CE)	X		
21. Alcohol Fuels (CE)	X		
C. Conservation & Improved End-Use Utilization			
22. Coal Combustion Systems (FE)		X	
23. Heat Engines & Heat Recovery (FE)		X	
24. Fuels Cells (FE)		X	
25. Buildings & Community Systems (CE)	X		
26. Industrial Conservation (CE)	X		
27. Transportation Conservation (CE)		X	
28. Multi-Sector Conservation (CE)	X		
29. Solar Applications for Buildings (CE)	X		
30. Solar Applications for Industry (CE)	X		
D. Science and Technology Base			X

APPENDIX C: DESCRIPTION OF METHODOLOGY

1. Overview Description of Methodology

The methodology used in this study can be summarized as follows. The list of RD&D programs to be prioritized was agreed upon and then each program was placed into one of four end-use areas: electric-related supply, liquids- and gas-related supply, conservation and utilization, and science and technology base programs (see Table C-1). Criteria to be used in assessing the technology priorities were selected and the definitions for each criterion agreed upon. Two sets of criteria were developed--one set of seven for the R&D programs and one set of five for the Science and Technology Base programs (see Tables C-2 and C-3).

It is important to note that the assessment or evaluation process involving the decision questionnaires which each member was asked to complete were not intended to and would not "fix" the results of the final priority ratings but were designed as an initial point of departure from which final conclusions would ultimately evolve--conclusions which may or may not be consistent with the initial ratings.

Each member of the R&D Panel was asked to make two assessments. The first was used to determine each individual's view concerning the relative importance of criteria for R&D programs and for Science and Technology Base programs. Each criterion was judged "very important" (value of 3), "reasonably important" (value of 2), or "slightly important" (value of 1) relative to Federal energy R&D priorities. A consensus weighting for reach criterion based on the average of all responses was calculated and then normalized to a value of one. The second form was the program evaluation form. For each criterion for each technology the members judged whether that criterion had a high (value of 3), medium (value of 2) or low (value of 1) importance. In addition each member was asked to state a recommended program funding level for each technology, his or her perceived level of knowledge concerning each technology, and any comments he or she wished to make concerning each technology.

The above information was then used to calculate figures of merit (FOM) for each technology. On the basis of the FOM the technologies were then ranked. The funding information was used as the basis for recommendations of future funding--namely, whether the funding for each program should be decreased, remain the same or be increased relative to the President's FY82 budget.

TABLE C-1

R,D&D PROGRAMS

Energy Related Supply Programs
- Magnetohydrodynamics (FE)
- Geothermal
- Hydropower
- Electric Energy & Storage Systems
- Solar Power Technology (CE)
- Magnetic Fusion (ER)
- Uranium Resources Assessment (NE)
- Uranium Enrichment - Centrifuge (NE)
- Uranium Enrichment - Advanced Isotope Separation (NE)
- Conventional Reactor Systems (NE)
- Liquid Metal Fast Breeder Reactor
- Clinch River Breeder Reactor
- Light Water Breeder Reactor
- Fuel Cycle R&D
- Nuclear Waste - Commercial (NE)
- Nuclear Waste - Defense (DP)

Liquids and Gas Related Supply Programs
- Mining R&D (FE)
- Advanced Technology (FE)
- Coal Liquefaction (FE)
- Surface Coal Gasification (FE)
- In Situ Coal Gasification (FE)
- Enhanced Oil Recovery (FE)
- Enhanced Gas Recovery (FE)
- In Situ Oil Shale (FE)
- Biomass Energy (CE)
- Alcohol Fuels (CE)

TABLE C-1 (continued)

Conservation and Improved End-Use Utilization Programs

- Coal Combustion Systems
- Heat Engines and Heat Recovery
- Fuel Cells (FE)
- Buildings & Community Systems
- Industrial Conservation
- Transportation Conservation
- Multi-Sectors Conservation (CE)
- Solar Applications for Buildings
- Solar Applications for Industry (CE)

Science and Technology Programs

- Energy Supporting Research (Overall)
- Basic Energy Sciences (Overall)
- Nuclear Sciences
- Materials Sciences
- Chemical Sciences
- Engineering, Math & Geosciences
- Advanced Energy Projects
- Biological Energy Sciences
- Climate and CO_2 Research
- Technology /Assessments
- University Research
- General Science (Overall)
- High Energy Physics
- Nuclear Physics
- Nuclear Medicine
- Environment and Safety
- Health & Environmental Research

TABLE C-2

EVALUATION CRITERIA FOR ENERGY R,D&D PROGRAMS

1. Technological Potential/Risk

Definition: Likelihood that the R,D&D Program will, within a reasonable period of time, result in technical success.

High (3) - Very good likelihood of technical success. (in other words, low technical risk)

Med. (2) - Reasonable chance of technical success. (in other words, moderate technical risk)

Low (1) - Only a slim chance of technical success. (in other words, high technical risk)

2. Urgency

Definition: Considering both the time period before which the technology is needed and the lead time for development, how urgent is the R,D&D program.

High (3) - Program must be started now (or continued) at a high level of effort.

Med. (2) - Program could be carried on at a moderate level now or, alternatively, delayed for 5 years or possibly 10 years.

Low (1) - There is no urgency in the program and it could be delayed for 10 years or more.

3. Economic Potential

Definition: Likelihood that the technology, when it is developed, will be economically competitive with then existing technologies providing energy in the same form or available alternative substitutable sources (note: assume development is completed no later than the year 2000).

High (3) - Economics are likely to be very competitive.

Med. (2) - Economics are uncertain or are likely to be marginally competitive.

Low (1) - Economics are likely to be non-competitive.

4. Benefit/Cost

Definition: Considering the size of the R,D&D investment needed to develop the technology, how substantial is the impact of the development of the technology in terms of end-use energy produced or saved.

High (3) - Less than $1 billion of total R,D&D investment required for each 1 Quad of energy produced or saved annually (in the year 2000).

Med. (2) - Between $1 billion and $10 billion of total R,D&D investment for each 1 Quad of energy produced or saved annually (in the year 2000).

Low (1) - More than $10 billion of total R,D&D investment for each 1 Quad of energy produced or saved annually (in the year 2000).

5. Energy/National Security

Definition: How significant is the energy technology from the standpoint of displacing or substituting for insecure foreign energy sources (primarily oil).

High (3) - Will displace or substitute for 2.0 million barrels/day or more (about 4 quads/yr) or oil equivalent by the year 2000.

Med. (2) - Will displace or substitute for 0.5 to 1.99 million barrels/days of oil equivalent by 2000.

Low (1) - Will displace or substitute for less than 0.5 million barrels/day of oil equivalent by 2000.

6. Safety, Security, Health and Environmental Impact

Definition: Both from the standpoint of the general public and the worker, the degree to which the technology is safe, secure, healthy and has minimal (or even positive) environmental impacts.

High (3) technology results in improved safety, health and environmental impact.

Med. (2) technology would have some adverse safety, health or environmental consequences, but not serious ones considering potential control measures.

Low (1) technology has serious safety, security, health or environmental problems.

7. Federal RD&D Role

Definition: considering the RD&D support for the technology that is likely to come from industry, how important to timely commercialization is Federal RD&D support.

High (3) - heavy Federal support is essential since because of the risk or long development period, industry support will be small.

Med. (2) - some Federal support is needed to complement industry efforts or to ensure timely development.

Low (1) - little or no Federal support is needed since industry efforts are likely to be adequate.

ADDITIONAL EVALUATION CRITERIA FOR SCIENCE AND TECHNOLOGY BASE PROGRAMS

Most of the above criteria are not directly applicable to evaluating DOE Technology Base programs. The benefits of these basic and applied research and engineering development activities must be measured against different criteria for obvious reasons. The following criteria are to be used for evaluation of the science and technology programs listed in Attachment 4D:

8. Scientific Potential

Definition: degree to which the research program will advance scientific knowledge or contribute toward maintenance of American scientific leadership and achievements in a respective field and, therefore, represents an important national trust.

High (3) - Very likely to produce significant advances in scientific knowledge on important new frontiers of science.

Med. (2) - likely to add substantially to fundamental knowledge in relatively developed and mature fields.

Low (1) - not likely to add substantially to new knowledge.

9. Inventive Potential (Risk/Benefit)

Definition: likelihood that the R&D program will over the long term directly produce breakthroughs, discoveries, or inventions in energy production, usage, or conservation which have significant economic, social or environmental benefits and, thereby, justify the risks/costs of the applied science and engineering research efforts.

High (3) - very likely that the R&D program will directly result in energy developments with significant economic, social, or environmental benefits over the long-run.

Med. (2) - likely that the program will at least break even in producing energy developments with economic, social, and environmental benefits over the long-run.

Low (1) - not likely to produce energy developments with direct economic, social, or environmental benefits.

10. Mission Impact

Definition: degree to which the R&D program supports or underwrites the success of DOE technology development programs by providing the technology base for understanding fundamental working properties of the technology, solving known and unanticipated engineering development problems, and transferring new engineering knowledge to other energy applications and missions.

High (3) - program provides essential research and engineering support for critical energy technology development missions and goals.

Med. (2) - program provides general support with widespread applications to technology development missions or areas with less critical problems or secondary missions.

Low (1) - program does not directly support technology development programs, but may have general applications.

The following two RD&D program criteria are applicable-to the science and technology base programs and are to also be used in evaluating the science and technology base programs.

2. Urgency

Definition: same as RD&D criterion Number 2 above

7. Federal Role

Definition: same as RD&D criterion Number 7 above

APPENDIX D

ENERGY RESEARCH ADVISORY BOARD
DISSENT TO RECOMMENDATIONS WITH RESPECT TO CLINCH RIVER BREEDER REACTOR

EXECUTIVE SUMMARY

Cancellation of the Clinch River Breeder Reactor Project at this time would not only result in time loss of investment of over $1 billion already incurred to date, but would also dissipate the hard-won technology capability already developed in the U.S., probably for the remainder of the century. Even if one accepts the argument that the breeder reactor program would only provide a useful option for energy generation sometime in the future, it is still necessary to complete the Clinch River Project in order to actually demonstrate this technology in the U.S. licensing and safety environment. Proven technology does not exist without an actual demonstration of acceptable safety, reliability, and operability. Although it is obvious from the achievements of the French, Japanese, British and Russian programs that sodium-cooled fast breeder reactors are practical, it has not been demonstrated that such plants can be designed, built and operated by U.S. technology and industry within the constraints imposed by domestic safety and licensing standards. The consideration of technology demonstration and preservation of U.S. presence in the worldwide breeder development program requires that the CRBR project be rapidly completed.

BASIS OF DISSENT

The energy future of the U.S. is subject to so many variables that no one can adequately predict what course the future will take with respect to energy. We do not know with any certainty how much energy will be used in 2000, for example, or what effect this will have on the growth of our economy.

It is also far from clear what quantities of the various fuels will be available. The U.S. must be prepared to cope with such undesirable events as partial or total cut-off of imported oil.

Electricity is a uniquely flexible form of energy. The transmission and distribution systems can be used to accommodate any source of generation, thus utilizing the energy source available at the time. The electricity can be transmitted to almost any desired point of use. This would be particularly useful in the event of disruption of energy sources due to any cause including enemy action.

The most available sources of energy, coal and uranium, can be best used to produce electricity. A larger part of U.S. energy needs could be supplied by electricity. It could be used for almost all space heating and provide much of the process energy required. This could be done in a more energy efficient and environmentally satisfactory way by the use of heat pumps.

It is predicted by the DOE that from 36 to 50 percent of the primary energy in 2000 will be used for the generation of electricity. It is probably possible to accomplish this, almost entirely by burning coal, but it almost certainly would not be the optimum choice on either economic or environmental grounds. There are clearly some undesirable health effects from burning coal and these should be minimized.

If one assumes that the upper end of the DOE 2000 LWR capacity projection of 200 GW occurs, this would require committing about 50 GW between now and 1990. Most, if not all of these reactors would be committed between 1985 and 1990. If there is about 900 GW of generating capacity in 2000 and the growth rate is 3.5 percent per year, then 31.5 GW plus replacements will be committed per year by 1990. It would seem reasonable for the nation to be in a position to have as much as 20 GW per year by nuclear plants. While it is possible that many of these plants could be coal burning, there are enough potential problems with coal plus the possible economic advantages of nuclear, that we should be able to take advantage of that option. This might amount to 243 GW of nuclear plants being committed between 1990 and 2000.

A 3.5 percent growth rate after 2000 would required additional capacity of about 540 GW, plus replacements, to be committed for operation by 2020. If half of this is LWR's then by 2010 about 4.6 million tons of uranium would have been committed for a 30 year life. If the life is 40 years, then 4.9 million tons would have been committed by 2010. (With a 40 year life there would be fewer replacements by 2020.)

According to a recent DOE report, there is a 95 percent confidence that there is 3,375,000 tons of U_3O_8 in the U.S., at a forward cost of $100 per pound. This includes reserves as well as probable, possible and speculative reserves.

Forward costs are operating and capital costs in 1980 dollars that would be incurred in producing the uranium; they exclude income taxes, profits, cost of money and sunk costs. The market price that would support a 15 percent rate of return has been estimated to be 1.4 - 1.6 times the forward cost per pound of U_3O_8.

It should be remembered that if there is the demand for uranium that approaches the amount potentially available the price rises accordingly.

The U.S. also has to a considerable degree a contractual, political and moral obligation to supply a considerable amount of uranium to industrial and developing nations.

The breeder should start being deployed in a significant way by 2010 or before as it is by no means assured that we would otherwise have the uranium required.

If reactors can be built in the time that is technically possible and if fewer design changes are made during construction, costs can be drastically reduced. This would make them the clear choice from the point of view of economics. To be able to take advantage of this may require deployment of breeders by 2010.

Even if breeders are not required due to the lack of uranium for LWR's, it may well be desirable to deploy them on economic grounds. The economics of the LMFBR compared to the LWR using break-even analysis has been extensively examined by various U.S. groups. The majority conclusion is that the break-even could occur around the year 2000 at an equivalent 30 year levelized price of uranium of about $50 - $150 per pound, in 1980 dollars.

The capital cost of breeders is higher than that for LWR's but the fuel cost is lower. This provides a good hedge against inflation as the capital costs will be a larger fraction of the kilowatt-hous cost and will remain constant. The longer the lifetime used in the evaluation, the more favorable for the breeder.

Recent cost benefit studies, using econometric models, have shown that benefits measured in hundreds of billions of dollars would accrue from early as opposed to late introduction of the LMFBR.

There has been no even marginally commercially successful reactor without a previous demonstration plant having been built. Those involved with the reactor development program believe that a demonstration plant is essential. There will be many things that will not work as well as would be desired when they are put together in a complete reactor system. The information learned from such a demonstration will lead to far better second and subsequent generation plants.

No U.S. reactor has even been built with a single scale up as large as would be represented by the scale up from FFTF to a 1000 MW reactor.

The major reason for success in both the Naval nuclear and the LWR program was that in each case there was a reactor being built which provided a focus for the research effort.

The refocusing of a broad range R&D program, even one already focused on the needs to build a plant, will be greatly improved as the result of data obtained in the design, construction and operation of a demonstration plant.

One of the principal reasons for the success on the LWR's has been the infrastructure, suppliers of equipment and services, that had been created and nurtured. Cancellation of the CRBR will cause a break in the industry continuity and many suppliers may be reluctant to get back into the breeder business.

If CRBR is not continued, then it will have to be replaced by another demonstration plant. The size could be somewhat but not much larger. This would require many additional years and far more money. If CRBR is completed the next plant can be built for considerably less than it would otherwise cost.

To date, there has been $1.148 billion spent on CRBR, $246 million of components have been delivered and $352 million more are on order. There are 3200 people working on this project and design is 86 percent completed.

The design of CRBR is as advanced as any in the world. The design techniques and safety studies are more advanced than those in any other country. The CRBR can accommodate changes required to demonstrate the LMFBR system, including alternate fuel systems.

In fact, the recently completed conceptual design study (CDS) by the DOE which assumes construction and operation of CRBR, contains relatively modest changes to the basic CRBR design. For example, the 1000 MW CDS plant would have the same core and IHX design concepts, and its containment would be based on the same design philosophy as CRBR.

Although the fuel handling systems of each plant are quite different, other CDS reactor components only reflect modest extension of CRBR design experience, such as reactor vessel piping with internal downcomers; shutdown heat removal system within the reactor vessel; four loops vs three; two stage coolant pump which retains the hotleg feature of CRBR; and flexibility to accommodate any one of three steam generator designs.

The CRBRP will serve as an important step in beginning the transition of the fast breeder reactor program from the technology development stage to the decision point of large-scale commercial utilization. The major objectives of the project are: 1) to demonstrate the technical performance, reliability, maintainability, safety, environmental acceptability and economic feasibility of the LMFBR central station electric power plant in a utility environment, and 2) to confirm the value of this concept for conserving important non-renewable natural resources.

Although paper studies, laboratory experiments, and component testing are essential steps in developing complex new technology, only the practical demonstration of the fully integrated systems can move it nearer to readiness for commercial use. The history of light water reactor development suggests that CRBR would be the first of probably two demonstration plants built in tandem before there can be sufficient investor confidence to make commercial deployment possible. Such tandem demonstrations will require about 25 years for design, licensing, construction, testing and demonstration of operating reliability and maintenance requirements. This would bring us to about the year 2007 before our nation is postured to commit additional breeders that would then begin to make their first energy contribution in about 2020. If Clinch River should be terminated, the entire program will stretch out at least an additional ten years.

With the risks of oil supply, the uncertainties of the environmental acceptability of massive additional use of coal, and the unknown about future uranium for LWR's, our nation can ill afford the risk of arriving at 2007 and not have the capability to deploy the breeder. It may not be needed until later, but if it should be needed then and not available, the consequences could be severe. Breeders will multiply the energy recoverable from our nation's uranium reserves by a hundredfold or more.

In dissenting from the majority vote of ERAB, the undersigned also feel that Clinch River suffered from the criteria used in voting and weighing procedures. Clinch River cannot possibly save energy by 2000, it wil. not replace oil by then, it has no economic potential during this century, all of which cause CRBR to receive low ratings in these categories. We do feel that it is an essential and integral part of the on-going LMFBR program which received high ratings, and CRBR should proceed with dispatch.

Respectfully submitted: John W. Simpson
Roland W. Schmitt
William S. Lee
Louis H. Roddis

ENERGY RESEARCH ADVISORY BOARD
ADDITIONAL REMARKS BY THOMAS B. COCHRAN WITH REGARD TO THE CLINCH RIVER BREEDER REACTOR

In its initial evaluation of DOE energy R&D programs, at least two-thirds of the members of the ERAB agreed that the Clinch River Breeder Reactor (CRBR) has low urgency, low economic potential, low benefit-to-cost ratio and that funding should be reduced. In the final analysis three-quarters of the ERAB members recommended that the "[breeder reactor] demonstration be delayed until a future time" -- a statement which clearly implies termination of the present CRBR project.

Four ERAB members have attached a six page dissent to the five sentences devoted to the CRBR[*] in this 61 page report, which evaluates 52 program areas covering all DOE energy R&D. Under normal circumstances, the report of the majority should respond to the points raised by the minority. Because ERAB was under an extremely tight schedule to complete this exercise, no time was made available to provide for a majority discussion of the minority view. Consequently, the following comments by one member of the majority are presented in order to provide some balance to the discussion of the CRBR issue.

URANIUM SUPPLY

In order to counter the majority view that "sufficient... uranium supplies exist to satisfy projected levels of electric demand for at least 40 years and possibly well beyond" (p. 56), the minority states that "no one can adequately predict what course the future will take with respect to energy" and then proceeds to present its own high nuclear growth scenario.[**] This has the effect of exhausting low cost uranium resources sooner than otherwise projected, thus making an earlier commitment to a breeder demonstration plant more persuasive.

The simple response to this argument is that when one is not ordering any new reactors, one is not going to run out of uranium. This, the current reality, is consistent with the low nuclear growth scenario of the most recent energy projection of the DOE Energy Information Agency's (EIA). It assumes no nuclear plants will be constructed beyond those where construction is already 10 percent complete. While this will probably be the most accurate of the EIA projections,*/ the following table shows that the minority estimate of nuclear plants built by 2020 (committed by 2010) is almost 2.5 times the EIA intermediate growth scenario and more than twice the nuclear capacity in EIA's highest nuclear scenario.

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[*] Three of these five sentences (at pages 3, 27, and 56) summarize statements in the other two.

[**] If this approach were applied to all energy R&D activities it would make orderly program planning and this ERAB exercise meaningless.

YEAR	DOE-EIA INTERMEDIATE-CASE GWE	 HIGH-CASE GWE	ERAB MINORITY GWE
1981	60	60	60
2000	175	195	200
2020	290	350	713

With its very high nuclear growth after 1990, the minority then argues that we will have committed 4.6 million tons of uranium by 2010 -- exceeding the domestic resources at a forward cost of $100/lb. The minority has conveniently ignored a) any reduction in LWR uranium requirements through increased fuel-use efficiency and reduced enrichments tails with advanced technology (30% to 50% improvements have been projected);**/ b) any improvements in uranium mining technology over the next 30 to 60 years; c) the more robust world uranium resource pictures;***/ and d) the availability of higher cost (lower grade) resources, domestic and foreign.

To further exacerbate the uranium supply picture, the minority implies that utilities will not build a nuclear plant in 2010 unless the uranium for all plants operating in 2020 is assured through 2050. This conveniently ignores the world experience with breeders that will be accumulated between now and 2010 that will permit prudent decision making regarding the need for and timing of commercial breeder introduction.*/

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*/ It should be noted that DOE and its predecessor agencies have consistently overestimated total energy, total electric, and nuclear electric energy growth during the past eight years.

**/ DOE, NASAP Report, DOE/NE-0001, Executive Summary, June 1980, p. 11.

***/ Two of our closest allies, Canada and Australia, are major export countries. In part because of competition from cheaper, higher grade foreign uranium resources, the domestic uranium producers are currently seeking protective import restrictions.

Properly framed, the uranium supply argument is subsumed in the larger question of when the breeder will become economically competitive with the LWR. The minority claims "most US groups estimate the uranium break-even price at about $50-$150/lb (1980 dollars." This claim is incorrect. The range in the most recent analyses is $150/lb to $400/lb.**/ With more credible assumptions regarding the growth rate in nuclear capacity and the capital cost difference betrween LMFBRs and LWRs, the breeder is unlikely to be economically competitive with conventional reactors until well into the next century, if ever.

More important than the issue of whether the breeder will ever be economical is whether the US can afford to wait a decade before reassessing whether to commit to a demonstration plant.***/The current economic outlook of the breeder strongly favors delay.***/

SUNK COSTS VS. FORWARD COSTS

The minority argues that cancellation of CRBR will result in the loss of over $1 billion investment already incurred. This is a familiar argument, but one based on bad economic theory. One should weigh forward benefits against forward costs and not sunk cost to evaluate the wisdom of proceeding.****/ Current estimates of the total project cost are in the range of $3.2 billion (1981 dollars) making the forward cost in excess of $2 billion,[*] an amount well worth saving, or applying to other more cost effective energy R&D programs. Furthermore, the $2 billion forward cost estimate is unrealistically low.[**]

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*/ The French will have operated the commercial size Super Phenix breeder reactor for some 25 years by 2010. Also, the US breeder program, even without the CRBR, would be one of, if not the, largest energy R&D efforts in the world.

**/ DOE, NASAP Report, DOE/NE-0001/5, June 1980, p. 42 gives $120 to $200/lb as the indifference price for LMFBR costing 1.25-1.5 times LWR as compared with a 15% improved LWR. Brian G. Chow, "Economic Comparison of Breeders and Light Water Reactors, Pan Heuristics, 23 July 1979, p. 74, projects $150 to $438/lb.

***/ In 1990, we will be in a far better position to judge the economic outlook for breeders based in part on the additional French experience. We will know also whether the "second coming" of nuclear power in the US is real or imaginary.

****/ The minority also takes no credit for R&D benefits obtained from $1.03 billion sunk of which only $608 million represents hardware completed or on order. Furthermore, if the project were cancelled part of $353 million (for hardware on order) would be recoverable.

DEMONSTRATION OF SAFETY AND LICENSING

The minority claims that "even if one accepts the argument that the breeder reactor would only provide a useful option in the future it is still necessary to complete the Clinch River Project in order to actually demonstrate this technology in the US licensing and safety environment."[***] Safety and licensing requirements, however, are evolving and would likely change drastically by the time the breeder is commercialized.[****] There is little to be gained by demonstrating present breeder technology in the current licensing and safety environment. Even if one accepted the minority view that one might wish to deploy breeders in 2010, it would make far more sense to demonstrate licensing in 2000, some 20 years hence.

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*/ The latest total CRBR project cost estimate is $2.88 billion (1980 dollars), based on 8% escalation rate and a completion date of 1988. By way of comparison the entire project was estimated in 1973 to cost $700 million.

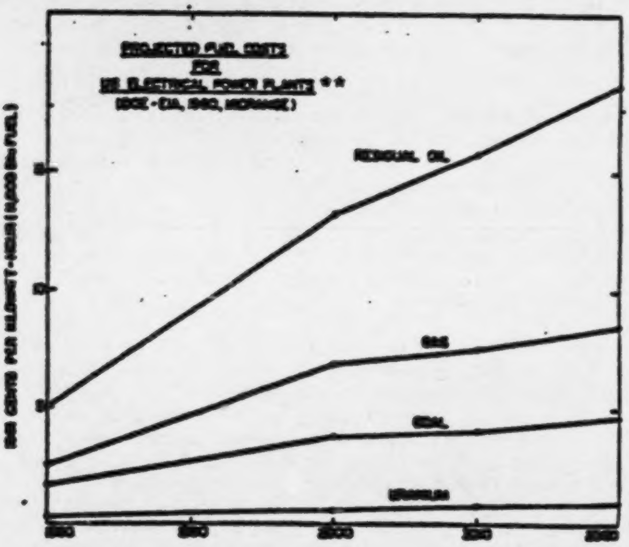
**/ It is based on a) the unlikely prospect that DOE will obtain approval from NRC to begin site work prior to completion of safety and environmental reviews, b) estimates of the construction schedule and cost that do not reflect the experience of most nuclear projects of this type, and c) the assumption that the Clinch River site is suitable. With regard to the last, NRC may require an alternate site, in part because of unfavorable meteorology and post TMI limits on population density. In this event the project would be set back an additional 4 years at an added cost of $1.7 billion.

***/ This argument would have been a bit more persuasive were it not for the fact that DOE has just requested a licensing exemption for the NRC (Letter from DOE Secretary Edwards to Nunzio Pallidino, Chairman NRC, Nov. 30, 1981) in order to commence early site preparation work prior to completion of the required safety and environmental reviews and hearings. This request, if granted, would enable DOE to initiate site work prior to the next CRBR budget review by the Congress.

****/ Anyone who seriously questions this need only examine the effect the TMI accident has had on the licensing requirements in effect just two years ago.

CONCLUDING REMARKS

The ERAB report raises the question of whether "federally-sponsored nuclear programs are receiving a larger portion of funding completely out of line with the expected nuclear share of the US energy mix during the next few decades." In the President's FY 1982 energy R&D budget $875.6 million -- some 31% of all R&D funds exclusive of the Science and Technology Base (see Table III-D) -- is devoted to breeders and advanced uranium enrichment technologies.*/ These activities can be seen, as viewed from the market place, as attempts to reduce the impact of rising uranium prices. The figure on the next page suggests that the problem is not with the uranium but with oil. When one also realizes that a) we can safely defer a commitment to the CRBR, b) the LMFBR base program expenditures can be substantially reduced once the program is refocussed for the longer term, c) a 50% reduction in the price of uranium enrichment will reduce electricity prices by only 0.1¢/kwh, d) our national security problem is with oil, not uranium, and e) improvements in energy productivity have proven to be the more cost effective means of providing additional "supplies," there can be little doubt that DOE energy R&D priorities are misplaced.



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*/ $875.6 million represents the sum of the budgets for the LMFBR Base, CRBR, Breeder Fuel Cycle R&D, Uranium Enrichment R&D (Centrifuge and AIS), and the LWBR (See Table IV-A, pp. 26).

**/Frank von Hippel, Testimony before the Subcommittee on Energy Conservation and Power, of the House Committee on Energy and Commerce, October 5, 1981.

DISSENT TO THE RECOMMENDATION WITH RESPECT TO ELECTRIC AND HYBRID VEHICLES

Electric and hybrid vehicle technology is high risk, but promising, and its continued development would well serve the long term national interest. The technology is high risk because the economic viability of electric and hybrid vehicles has not been demonstrated. It is promising because of the rapid advances in the offing for performance improvements and cost reductions of electric drive systems based on power semiconductor devices, and because of continued progress in battery technology. And, it would serve the long term national interest because it directly addresses the problem of total dependence of the US on liquid fuels for personal transportation services.

Under normal circumstances it would be expected that development of electric vehicle technology would be pursued at a reasonable level by the automobile industry. However the present condition of the industry is such that it cannot be expected to pursue this high risk development without some Federal support. Termination or sharp reduction of the Federal program at the present time would significantly delay electric vehicle development and substantially increase the risk that this technical option would not be ready at the time when it might be needed.

Respectfully submitted: Roland W. Schmitt